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# Schools Must Outwit the Handicap of Pennywise Policies

*Essential public education needs can be provided even with present restricted budgets if executives have an intelligent and broad view of the entire problem*

By FRANK CODY, Superintendent of Schools, Detroit

AFTER reading extensively what has been said about schools in the past two years I have reached the conclusion that there is no general opposition to public education in this country.

The real leaders and thinkers realize as never before the value of the school as a social stabilizer. I hate to think of what might have happened during this period of economic readjustment if the schools had not operated just as they did during the last generation. Despite the apparent setbacks and the general restriction of budgets, public education is still essentially sound, intact and ready to meet the serious problems of the future. I see no cause for general despondency. On the contrary there is much room for optimism respecting the future.

The pessimist will immediately say that I am a Pollyanna, wishing for fairies and then finding them. I submit that the reverse is true. My conclusions are based on factual observations. Let me review the most salient of these briefly.

A recent survey of 1,400 school systems in towns of 2,500 or greater population indicates that 630 or 45 per cent of these will either maintain or increase salaries during the ensuing year.

The median budget in 827 cities is only 6.3 per cent lower than in 1931-32. Of course there are extremes in this list but the significant fact remains that budgets have not been cut so badly as general opinion leads one to believe.

It is quite true that the schools have not made these reductions in terms of the whole problem but rather in skimping on those essential agencies, such as textbooks and supplies, without which teacher effort and teaching efficiency are greatly handicapped. In many instances salaries have been maintained to the detriment of other essentials. To the extent that these budget statistics are a reliable index of trends, I believe my first affirmation is supported by facts.

What is opposition? Even in the best of times there is a certain amount of opposition to changes in public education. This opposition comes from those who have no children, from those who are aristocratic in their thinking. More generally it results from lack of understanding on the part of the public. It has been my experience that whenever the purposes and needs of public education have been intelligently presented to the public and when the profession is patron-conscious, this opposition is trifling. No matter how long we live we cannot force all people to think alike. I believe further that a little opposition is a wholesome thing. It prevents

many mistakes that might have serious results.

During a depression everyone is low mentally and spiritually. It is a perfectly natural state. They may even organize to reduce school costs to what they consider an emergency level. But—these same people in normal times are among the best friends of public education. Let's not look at them too severely now, especially when we consider that they have lost the result of years and years of work. The normal amount of opposition that might be expected is merely accentuated during a depression. Much of it is temporary.

Budgets have been reduced chiefly because of the inability of the people to pay. This is a temporary condition. Just as soon as the industrial wheels start turning a little faster than at present —and present indications give ground for hope—relief will be at hand. Under our system of mass production it does not take long to restore purchasing power once the basic confidence is restored.

The demands of all governmental activity must be reasonably satisfied. Capital expenditure incurred by other agencies than the schools must be met. Hungry people must be cared for until they again become self-supporting. The schools can expect only a reasonable share of the total. Statistics indicate that in general they are getting it.

### *We Have Ourselves to Blame*

Let me return again for a minute to the factor of public understanding. In good times schools expanded in accordance with social need. Curricular changes, building requirements based on the course of study, increased enrollment, greater holding power and the consequent need for better trained and better paid teachers increased the essential outlay for public education. Our profession was lax, however, in not carrying the public with it. We neglected to keep the fathers and mothers of our children fully informed. In places where a well defined and intelligent public relations program had been developed, based on fact and not on silly propaganda, the value of this effort is now apparent. Where public relations were neglected, the program was hit much harder. I reiterate that it is not the fault of the people but of the profession itself.

### *Research Proves Its Value*

I want to go further and say that in public school systems where research was stimulated and developed and where the executive engaged in long time planning, it has been possible to save everything worth while even under present conditions. The facts gathered through careful research provide the best base I know of on which to build plans and through which to defend programs. Research has another value. It tends to make us see the problem as a whole rather than merely those parts that are particularly dear to us. It enables us to look more objectively on the entire plan and to provide for a balanced program.

### *How Detroit Met the Situation*

Let me illustrate. Detroit was probably hit as badly, if not worse, than any of the large industrial centers. It was a boom city during the "golden era." Boom conditions apparently required large capital in municipal expenditures. A partial pay-as-you-go program at least was indicated a decade ago but it appeared to be politically unfeasible. As a result the bonded indebtedness became excessive. The closing of major industries threw thousands on the hands of welfare agencies. The capital and welfare demands took precedence. All other activities were restricted. The Detroit schools were prepared. Ten years of extensive research gave us a fairly good command of all problems. The program was reduced in accordance with the need.

It is significant to know, however, that no essential activity was lost during this period. Night schools, so essential to industrial rehabilitation, were not closed. The enriched curriculum, vital to present day social needs, was not stripped and reduced to the needs of the 'sixties—the three R's. Essential repairs to the school plant were not neglected. Equipment, supply and textbook requirements were met in proportion to the restricted program. Teachers necessarily were dismissed. I do not mean to say that the schools did not suffer but considering the gravity of the emergency our skeletonized organization has preserved all vital activities.

### *The Future Looks Brighter*

A careful review of the entire situation, so far as I am personally familiar with conditions, leads me to reaffirm my first opinions—there is no general opposition to public education and the public school program has fared relatively well when the full significance and scope of the depression are given due consideration.

What of the future? I firmly believe that the worst is over and that the economic horizon is brightening. I believe that within a five-year period public education may realize that a depression is not without its benefits. We shall have a better trained and more efficient teaching personnel. Teachers will acquire a social viewpoint that has been lacking in the past and will become more public-conscious. Certain sixteenth century subjects may be eliminated from the curriculum while twentieth century subjects and activity needs will

be retained. The profession may stop hunting commas and begin to see the greater social values. Academic aloofness will be replaced by dynamic participation in community life. The profession may assume more leadership and display less followership. I believe that the future is bright if we look at the forest instead of trying to count the undersized trees. One word of caution is necessary. None of these benefits will be achieved unless as a profession we stop thinking of ourselves and begin to cooperate in a whole-hearted fashion to attain the finer and better things in education.

Ability to pay is an elastic phrase. Any system of taxation will fall down during a depression. Taxation is a delicate field. We hear much of a scientific method of obtaining funds. Leaders in economics and in educational finance tell us of the beauties and possibilities of the different panaceas they propose. In all of this discussion we must recognize that taxation in the laboratory and taxation in field practice are two different things.

### *Taxes Are Based on Industry*

It is extremely questionable whether taxation will ever be scientific. Theory does not seem to work well in this field. While it is undoubtedly possible to relieve the heavy burden on real property by practices that tend to spread the burden over a larger portion of the population, no system proposed will even approach what its enthusiastic originators hope for it. Every tax plan is based on industrial activity. Every tax plan will suffer during depression. As school administrators it might be just as well if we gave up fond hopes for a tax millennium and realized that we must work in the future as in the past with the present system or with a slightly modified system, which will always be open to criticism in some respects. So, instead of hoping and praying for relief through statute changes in methods of securing revenue, my advice to administrators is to study their needs more objectively and start better work from that end. There are no miracles in taxation.

It is also questionable whether large state funds will offer the answer to our problems. Again, I feel strongly that we must determine first of all the most feasible size of administrative unit and must eliminate the major difficulties now caused by units much too small to support a twentieth century school program. After that has been accomplished the matter of state aid may be considered. Any present relief that may come through large state funds, without corresponding changes in the size of school districts, will merely serve to fasten these pioneer inadequacies on education and on the people and will result in greater real burdens without any increase in efficiency.

Our immediate problem will be solved not by looking with the yearning eyes of a young maiden for relief outside of our situation but by making a searching study of our own needs, regardless of what traditional assumptions may be. The great need is for objective planning over the next ten-year period and the elimination of all that cannot be justified as measured by such a program of needs.

Reports indicate that many of our school systems in a state of panic are engaged in "pruning the curriculum." If this activity were confined to the elimination of dead branches to protect new growth it would be helpful. It appears, however, that the twentieth century subjects and needs are going overboard. I believe firmly that any diagnosis of social needs can justify vocational education, child guidance, psychological diagnosis and remedial work. I believe that the spending of larger sums of money on children of low intelligence and fitting them for successful participation in our economic life, rather than preparing them for institutional life where they become a life burden on the social order is more than justified in dollars and cents. Reclamation work may seem expensive but it is much cheaper than the later work of our police, the courts and corrective institutions.

Vocational training is vital to our present day needs. It is one of the last things that should be cut. Night schools, both for socialization of the immigrant and for rehabilitation of the adult who is forced to occupational change, are so essential to social welfare that their elimination means nothing short of social calamity in the future. The timid executive who drops the finer and the more essential social activities of the school will find that his community faces new and even more expensive problems in the future. Initial money savings in essential work lead to ultimate extravagance rather than to economy.

### *More Vision Needed*

We need more vision in the profession. Every executive should be able to see the educational problem as a whole in its immediate interrelated activities and in its ultimate social implications. If we look at education functionally, it is quickly possible to see that teachers alone do not make schools possible. They must have adequate buildings, well ventilated and heated and in good physical condition. They must have supplies that are of the quality necessary for the work at hand. Cheap paper, pencils, pens and ink are not economy. They may be gross extravagance. As the teacher is trained today, the textbook is still a vital necessity. Textbooks wear out quickly. There is no economy

in cutting down this essential instructional tool. Equipment vital to instruction must be given the same consideration as teachers. The problem must be viewed as a whole and, even under restricted conditions, a well balanced budget must be developed. Nonessentials must be eliminated but things vital to our present day needs must be reduced only in their fair proportion.

I should like to summarize the situation as I see it by stating that there is no occasion for pessimism. The clouds are lifting and the day is getting brighter. The schools have been restricted but they have not been paralyzed. Teachers and executives are a part of the social order. Any economic readjustments will affect them as well as others. The profession as a whole has fared well during the depression. There is definite need for intelligent planning, for a wider social viewpoint, for greater reliance on the ability of each community to work out its own problems. There is need for considering the problem of education as a whole and for satisfying as far as restricted means permit every activity of the entire plan in proportion to its supplementary contribution to the central instructional process. I see little to become pessimistic about in the future if we exercise the responsibilities of the leadership entrusted to the profession and if we keep the people constantly informed and close to the schools.

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## Budget Cutting Is Spreading in City Schools

"American public education is experiencing a severe trial," according to a report on trends in city school finance recently transmitted to the U. S. Office of Education by the National Education Association.

The study states that "while a number of school systems have thus far escaped, many cities are evidently undergoing a period of forced retrenchment which has little real connection with either savings or economies in the exact meaning of those two words."

Questionnaires asking for information in regard to plans for 1932-33 were sent to 3,333 cities having a population of 2,500 or more. Replies were received from 42 per cent of the cities.

Boards of education in 627 cities, or 45.2 per cent of the 1,388 cities which have reported on salaries of teachers, will either maintain or increase their old salary schedule. However, this is a drop from 1931 figures when 90 per cent of the cities were increasing or maintaining salaries paid. This reduction would be even greater if it were not for the fact that some of the cities maintaining salaries in 1932-33 withheld increments or made reductions in 1931-32.

Budgets of 827 cities were studied and the median budget approved for 1932-33 is 6.3 per cent lower than the 1931-32 budget. This is the second school year in which the trend of education budgets has been downward.

Nine methods of retrenchment other than teacher salary cuts are proposed by 1,231 school systems to meet the revenue shortage in 1932-33. The impact falls most frequently on the classroom teacher. The teaching load has been increased in 485 cities, which was made possible by reducing the number of teachers or appointing fewer new teachers. Retrenchment in the purchase of school supplies was frequently mentioned. This has been introduced in 425 cities.

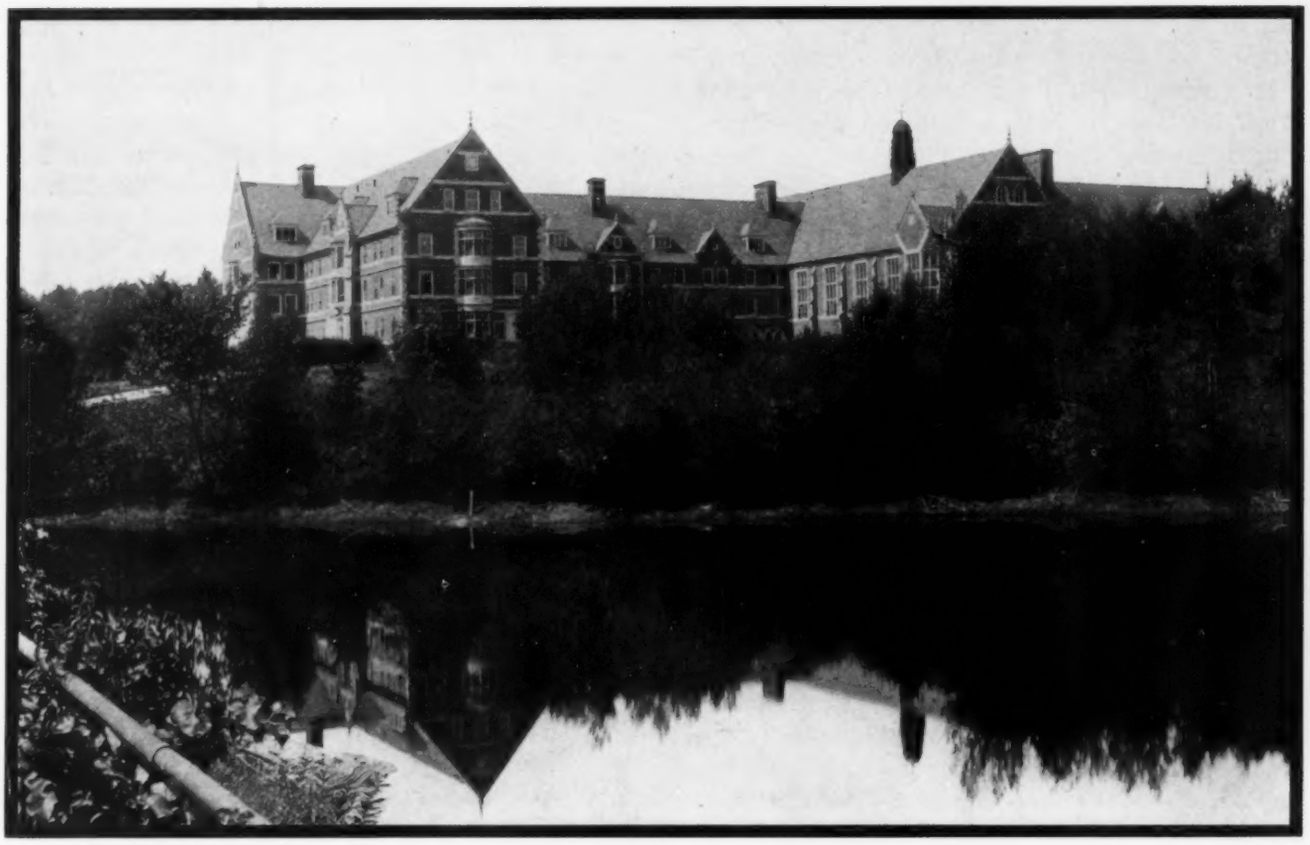
### *Repairs Are Being Neglected*

The postponement of needed repairs or other retrenchment in the maintenance program is third on the list, and is mentioned by 341 cities. The operation of the school plant is fourth in order, with 223 cities reporting attempted economies on this item.

Other items mentioned by forty cities or more include: curtailment of capital outlay, 182 cities; retrenchment in purchase of textbooks and supplementary books, 173 cities; reduction in expenditures for new furniture and equipment, 118 cities; reduction in the number of supervisors, 80 cities; reduction of sick leave allowances, 54 cities; reduction in the cost of transporting pupils, 49 cities; adjustment of insurance, 43 cities; reduction of night schools, 42 cities; consolidation of schools, 40 cities, and less music teaching, 40 cities.

Hard times in business are reaching the schools in two ways. Many schools are facing an actual shortage of revenue due to tax delinquency, lower assessed valuations and lower tax rates, faults in tax systems or in tax administration, bank failure, or to a combination of these factors. Many cities are introducing retrenchments for one or more of the following reasons:

Salaries and incomes of other groups in the community have been lowered and a demand has arisen for corresponding reduction in teachers' salaries and school income, although the financial situation of the city might not be acute. A depression hysteria clamors for cuts in school costs just because costs have been reduced in other cities. Finally, a lack of appreciation and confidence in the schools, linked with distrust in all governmental procedures, is appearing on every hand.



# Prizes for Superiority

*The secondary student, compared to the college man, fares poorly in the matter of scholarship aid. The author describes the various practices followed in distributing secondary scholarships*

By EARLE HITCH, Culver Military Academy, Culver, Ind.

EQUAL opportunity for all and special privilege for none begins in the schools of this democracy. Bent on the development of a literate citizenship, public policy demands that all the sprouts in the garden be tended and counts on making the most of a mine run crop.

Bound by this political idea and beset by the complexities of providing adequate instruction for all at the least cost to the taxpayer, public school administrators are rarely in a position to give the gifted student more attention than others.

This practice is sharply at variance with English methods, which favor public support in secondary and higher education only for those of demonstrated fitness. In London an elaborate system provides for rating elementary pupils and the superior boys and girls, if in need, are awarded maintenance allowances in the intermediate and secondary schools.

In both England and France scholarships are used as aids in selecting those best fitted to be educated.

The American public secondary school, unlike most of the tax supported colleges and universities, has neither endowments nor other emoluments which may be applied to the support of able students. It is therefore handicapped in any goal beyond the maintenance of an open door.

In these circumstances there are missing from the secondary levels of learning many of the subsidies for intellect that are offered in the higher fields. This does not imply that there are not to be found in progressive systems secondary courses that have been devised for the advantage of the fit and the quick. But such systems are powerless to provide financial

aid to the individual. The promising secondary student without the means to pay his way must in most communities either abandon his aspirations, work his way, or pin his hope on a scholarship. But in the distribution of scholarship aid the secondary student, in contrast to the college man, fares like Mother Hubbard's dog.

*Only 200 Schools Offer Scholarships*

Restricted to the academic routine of college preparation the secondary student rarely makes a new discovery or contributes to the knowledge of mankind. The problems with which he is concerned are not associated with the public service, and perhaps that is one reason he comes so little to the attention of possible benefactors. Then, no doubt, it is presumed that the public high schools put education in the grasp of all preparatory students. But this does not solve the difficulty of the talented boys and girls who are intellectually rich and financially poor.

It is the estimate of the United States Office of Education that some ten million dollars are spent annually for the support of promising brains and the development of special capacities in the higher institutions of learning, in which 1,099,468 students were enrolled last year. In addition to this sum it is estimated that about four million dollars are made available in loan funds each year. There are no complete statistics on scholarships and student aid in the secondary schools, but careful investigation and research among representative private secondary schools (where practically all secondary scholarship aid is to be had) indicate that there is not more than three-quarters of a million dollars available annually to secondary students, of whom there were more than four and one-half million last year.

The last available reports show there are approximately 3,000 private high schools and academies in the country, enrolling about 310,000 students. The private school, occupying a special place in the educational field, puts its emphasis on scholastic achievement. Learning of a high order is its special product and it is always anxious to further the cause of scholarship. It expends on scholarship aid as much as its resources permit, because it is realized that, apart from the service to the individual, the school itself benefits from the influence and example of superior students.

Of the 3,000 schools not more than 200 have sufficient resources to enable them to offer scholarship aid. Sargent's handbook of private schools lists a total of 138 having scholarships. Of these twenty-four are coeducational, forty-four are girls' schools and seventy are boys' schools. These lists are not complete but they were intended to include all the principal schools having scholarships of any consequence.

No matter to what degree these schools may recognize an obligation to encourage scholarship and to provide for genius they can scarcely be expected to meet the full demand. Only the old-established schools which have the support of strong foundations, and a few others that have lavish financial backing, are able to afford any considerable number of scholarships.

Practically all in this category are boys' schools in the New England and the Middle Atlantic states. Notable in the list are Phillips Academy, Andover, Mass., established in 1778, the oldest of the American academies; Phillips Exeter Academy, Exeter, N. H., founded in 1781; Mercersburg Academy, Mercersburg, Pa.; St. Paul's School, Concord, N. H.; Hill School, Pottstown, Pa.; Worcester Academy, Worcester, Mass.; Peddie School, Hightstown, N. J.; Hotchkiss School, Lakeville, Conn.; Taft School, Watertown, Conn.; Choate School, Wallingford, Conn.; Lawrenceville School, Lawrenceville, N. J., and Tome Institute, Port Deposit, Md. Leaders in this group in the Middle West are Culver Military Academy, Culver, Ind., the Cranbrook School, Bloomfield Hills, Mich., and Lake Forest Academy, Lake Forest, Ill. This list is far from complete, but the schools named are the ones best supplied with scholarship resources.

*Who Are the Superior Students?*

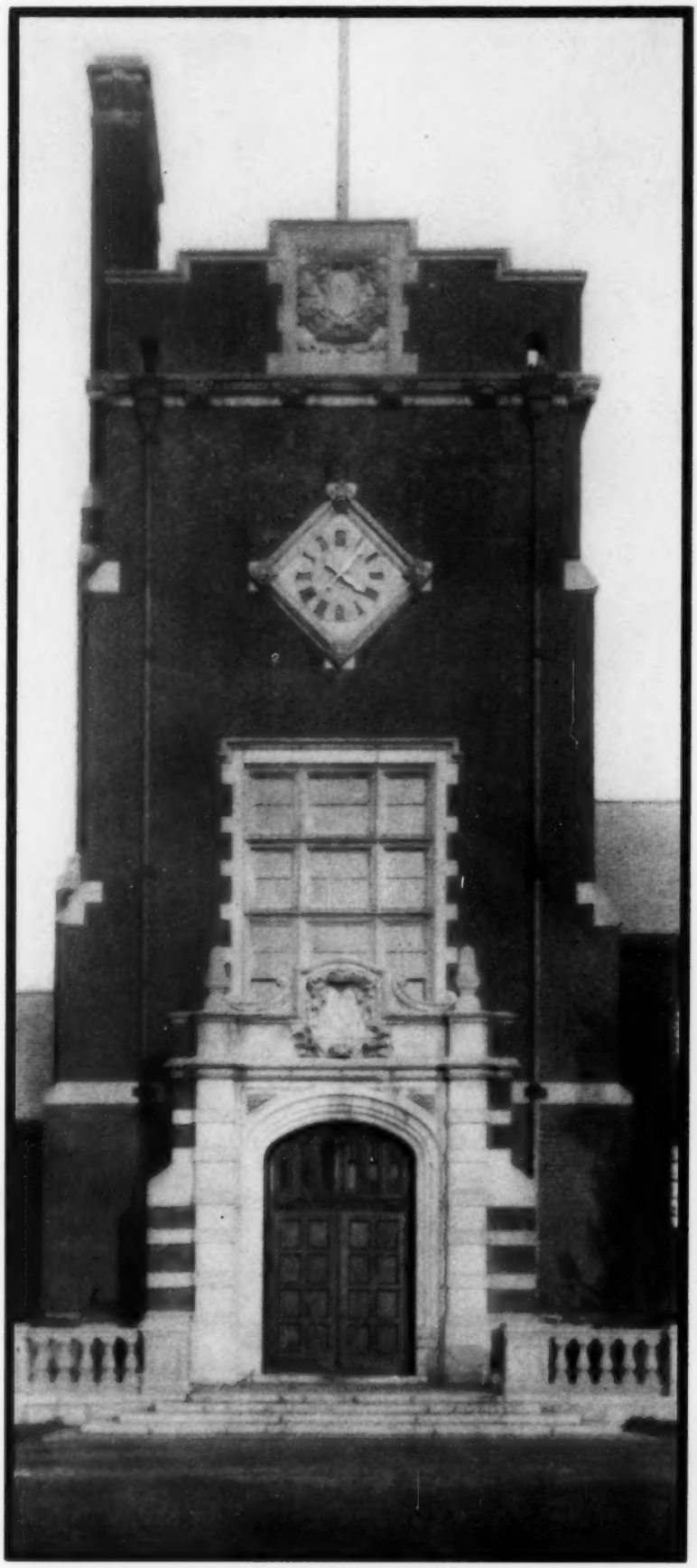
Among the philanthropic foundations committed to the assistance of secondary students are the Canton Foundation, Canton, Ohio; the Mary Gaston Barnwell Foundation, for the assistance of students and graduates of the Central High School, Philadelphia; the White-Williams Foundation, Philadelphia, whose social service aids in maintaining many worthy students in high school, and the Indianapolis Foundation, which looks into the cases of all students leaving high school before graduation, and seeks to keep as many as possible in school "whose further training would be an asset to the community."

There are, of course, numerous other better known philanthropies for child training and welfare, but they are engaged in other endeavors, either vocational, social or instructional. Here only aids to capable students are being discussed.

Most scholarships are partial instead of complete, the donors preferring to spread their assistance among as many as possible, on the theory that it is better to do a little for many than to provide all for a few. Which method is most productive to the public good may be open to debate, but the general practice in the secondary field provides few stipends that cover more than one-half of the

expense. The policy of one-quarter scholarships is favored at Hill School. Many schools prefer to keep their scholarship funds liquid and apply them to fit the particular needs of changing situations, as is the case at Phillips Academy, where it is generally recognized that more scholarship aid is given than in any other secondary school. This academy ordinarily carries about one hundred boys on its scholarship list. The aid given them varies according to the scholastic standing of the students themselves. The aggregate income from Phillips Academy's endowed scholarship funds approximates $19,500. Other awards, made from the unrestricted income of the school, raise the annual scholarship expenditure to a total of more than $36,000. All Phillips scholarship boys earn their board in the dining room.

Other schools have working scholarships, by which high ranking students in need of assistance, may earn their board and room by waiting on table and performing other services. Practically all the military schools offer scholarships to boys of musical and mental ability who can fill places in the school bands.



*The campus of Worcester Academy is on an elevation near the outskirts of Worcester, Mass., and this towerlike structure blends well with the surroundings.*

The prizes are intended, of course, for superior students, but who are they and how are they to be found?

There is as yet no settled or dependable course on which to base conclusions in the selection of beneficiaries. In most cases scholarships are still given on something of a gamble, generally to young minds which have made a good record and which make a good impression in a single interview.

Every committee wants quick wit, self-possession, a ready answer, a bright face and imagination, as well as keen intellectual powers. These are the attributes the committee wants, but how to find them, how to know them when it comes face to face with them, is still something to be discovered. There are tests that show the presence or absence of these qualities, but it is doubtful if they can show the degree in which they exist, and it is only in a few schol-

*The drive leading to the front entrance of the Episcopal High School, Alexandria, Va., brings the visitor to a beautiful colonial type building. The institution has long been a diocesan school for Virginia and West Virginia.*

arship contests that these tests have been used.

Lacking a better yardstick for measuring superiority, selection is usually based on past record; most awards go to those who rank high in classroom performance, have good character and manifest an industrious and an honest spirit.

Progress can surely be made in perfecting, to some degree, scientific methods of selection. High grades and a certain literary ability were once sufficient to earn recommendation. Now the tendency is to recognize a great many other factors, both biologic and psychologic, in the reckoning of scholastic capacity. After all, the fundamental concern is citizenship, and bookwormish attributes are not so highly prized by the analysts who have delved deeply into the problem.

In measuring future usefulness various imponderables are given weight. Examining committees have become more curious about such factors as emotional stability, willingness to cooperate, capacity for leadership and other points essential to sound social adjustment. The power of the individual to do good for others as well as for himself may become a general test in scholarship selection.

In the secondary schools scholarship students are usually chosen by headmasters, by committees of the faculty or trustees, or by competition. Culver Military Academy, with the cooperation of committees of educators and psychologists, is experimenting with a method of applying definite scientific devices to the measurement of the qualities desired.

The candidates are given various forms of standard tests of mental ability and achievement, and a test on knowledge has been developed especially for these selections by Dr. William A. Brownell, psychologist, Duke University, Durham, N. C. The candidates selected for final consideration are examined by psychologists or men experienced in mental hygiene, who pass on their emotional stability and social adjustment. These tests are to be given to scholarship applicants over a period of years and their validity is to be checked by carefully watching the future progress of each student. This can be carried out under unusually favorable conditions at Culver because all students are under a regulated and controlled situation.

Unhampered by the necessity of taking all who present themselves, the private school can and does use its scholarships as a basis for acquiring a high degree of selectivity. Some schools have developed methods that suit their own particular pur-

*The Harry Elkins Widener Memorial Science Building at Hill School, Pottstown, Pa., is typical of the dignified type of buildings on the campus of this institution. The school was established in 1851 by the Rev. Matthew Meigs.*

poses; some others have introduced experiments that may make a contribution to the goal of scientific selection.

Dr. Charles H. Judd, one of the country's foremost educators, has stated that: "It is quite impossible in the great establishments set up as public schools to try some of the experiments and adjustments that are necessary if American education is to be successful. It is in institutions of this (private preparatory) type that the changes in methods, changes in curricula, adaptation of work must be worked out if the next generation is to be well taught."

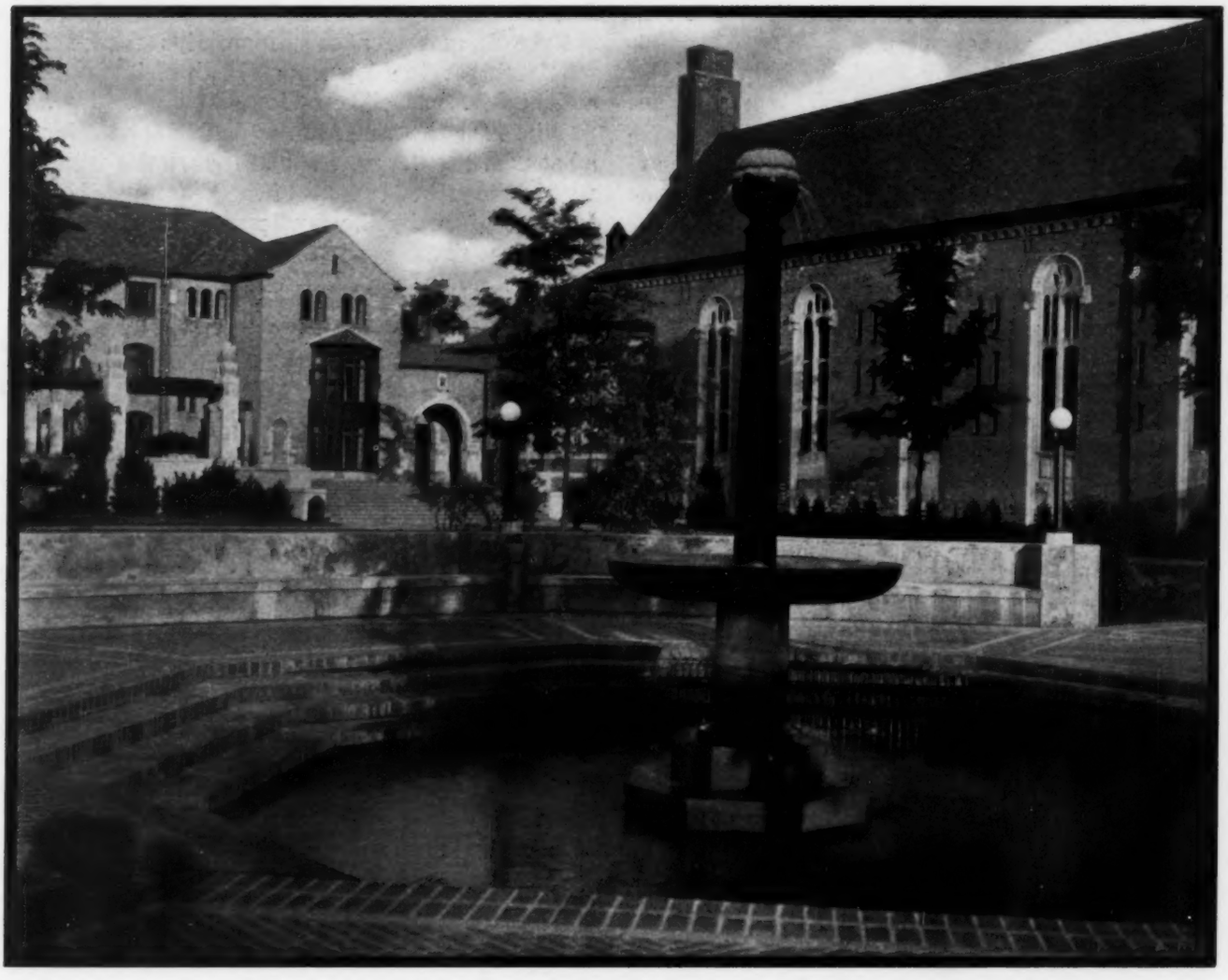
Some schools lay special stress on letters of recommendation from alumni or others in a position to judge the candidate's capacities and in whose judgment the committee has confidence.

Dr. Alfred E. Stearns, headmaster, Phillips Academy, speaking of the practice applied by his school to the selection of new boys, said: "We are compelled to rely on the previous school records, our own entrance examination results, and the testimony of those who knew the boys before they came to us and have given us reason to believe that they are well qualified to meet the Andover standards and justify our investment of scholarship funds in them. Whenever possible we like to secure the endorsements of old Andover boys who are acquainted with our scholarship standards and other requirements, since their testimony is much more likely to prove trustworthy than is that of one to whom the school is only a name."

At Lake Forest Academy recent changes have been made in the methods of making awards. Examinations that are competitive in a sense are required. The decision is not made solely on scholastic marks; an interview is an important factor and a study is made of the financial status of the applicant's family. "It is not our intention," said John Wayne Richards, the headmaster, "to award scholarships to boys whose families are able to pay the regular tuition fees."

In practically all cases recipients of scholarship grants are required to give evidence of financial need as well as of their mental capacity.

"Ordinarily no student may hold a scholarship unless he gives evidence of financial need by earning a substantial part of his expenses," says an announcement from Peddie School, which offers scholarship opportunities to many boys. "All awards of aid presuppose on the part of the applicant full compliance with the following conditions,



*This graceful fountain and pool, surrounded by beautifully landscaped grounds, lends a restful atmosphere to the campus of Cranbrook School, Bloomfield Hills, Mich. In the background are two of the main buildings.*

failure to fulfill which will result in immediate withdrawal of aid:

"1. To restrict all expenditures to a minimum consistent with the claim of limited means. . . ."

The amount of the secondary school stipends varies widely. The range is from $2,000 a year, including all expenses, to quite modest sums, such as $50 or $100 a year, given to cover certain fees or incidental expenses. The average would not exceed $350 a year, but even so, and here is one point in the secondary student's favor, it is greater than the average value of college scholarships. This is due to the high value of the full scholarships, which include board and room, and some which include clothing and textbooks as well.

*The Elm Arch is one of the many beautiful spots on the campus of Phillips Academy, Andover, Mass. The school opened in the midst of the Revolution and is the oldest of the great national schools.*

Practically all awards are partial awards, but a few are either full-tuition or all-expense grants. The latter are sometimes given as prizes for peak performances in stiff competitive tests of scholarship and mental capacity.

Phillips Exeter Academy has sixty-five awards and their aggregate value per year ranges from $25,000 to $30,000, according to the income from endowed funds. The scholarships are awarded competitively to those ranking highest in three factors—character, scholastic attainment and need of assistance. An established committee on scholarships considers all applications at the end of each term and awards are made for the succeeding term only. Scholarship boys are expected to get a C average and to pass in all subjects. The value of the awards ranges from $350 to $1,600 a year.

Kent School, Kent, Conn., has six endowed scholarships varying in value from $150 to $300 a year, and an arrangement peculiar to itself. Kent has no established tuition fee. It maintains a high standard of admission and parents of the boys it accepts are permitted to determine what they can afford to pay. About one-half of the present student body is being carried for less than the aver-

age tuition payment. The trustees endeavor to conduct the school at cost price.

Mercersburg Academy is giving help to about seventy-five of its 500 students. These awards are not made from endowed funds but from the working capital of the school and the recipients are expected to perform certain useful services, such as clerical work and waiting on table, in return.

Slightly more than 10 per cent of the students in Hill School are scholarship boys. In this school, where the boarding tuition is $1,450, seventeen students receive full scholarships and twenty-four others receive partial scholarships, most of them of half value. The aggregate yearly value of Hill scholarships is $25,000.

St. Paul's School has thirty-eight endowed scholarships for the aid of forty-five or more boys. The distribution of a number of the grants is left to the discretion of the school authorities who weigh particular needs of the candidates. Most of the gifts in the St. Paul's list are the yearly earnings from funds ranging in size from $5,000 to $10,000.

Lake Forest Academy maintains fifteen full scholarships; the Episcopal High School, Alexandria, Va., has eight endowed scholarships and provides for the remission of half of the tuition to all sons of the clergy. Four of the scholarships are within the gift of bishops of the Episcopal church; two are given by the trustees of the school, and two by the school's principal.

Culver Military Academy has more to offer in the way of scholarship aid than any other private military school. It has four endowed scholarships, each providing half tuition (which includes board and room); twelve all-expense scholarships (which are unique in their liberality as they include textbooks, uniforms and military equipment); a varying number of band scholarships for boys of scholastic talent who can fill vacancies in the school band, and a number (not definitely prescribed) of scholarships which are bestowed by the board of trustees upon worthy boys of high capacities who

*An interior view of the beautiful Warren Memorial building on the campus of Worcester Academy. Founded in 1834 for pupils with limited means, it early received endowments from its Baptist sponsors though it is now nonsectarian.*

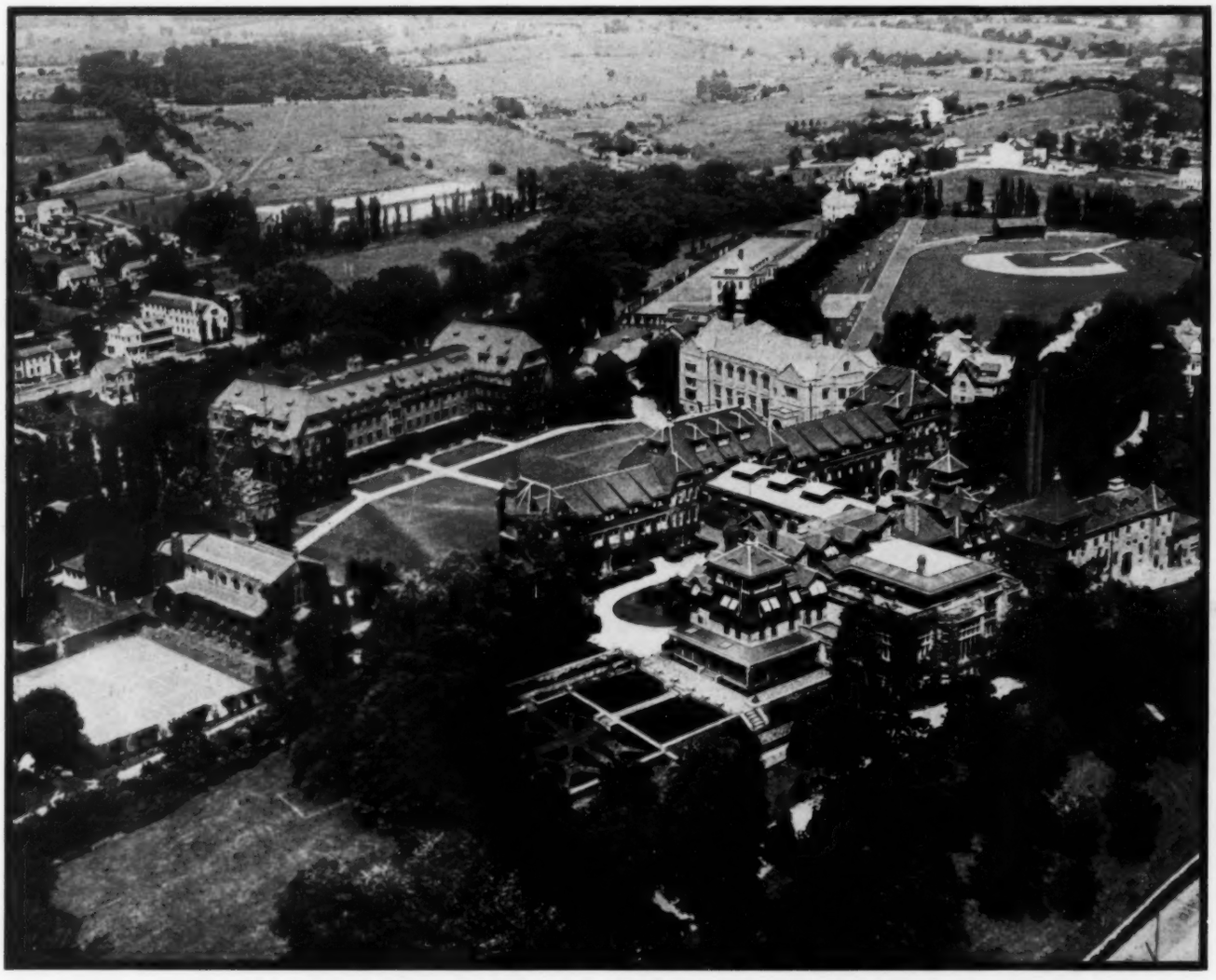
could not otherwise enroll. Each of the trustees' scholarships is worth $500. The aggregate value of these scholarships varies with the number given from $25,000 to $35,000.

Lawrenceville School gives between $13,000 and $14,000 annually to students, chiefly to sons of alumni. The average gift is between $500 and $600.

Peddie School has endowed funds that provide an exceptionally large scholarship income, about $35,000 annually, which appears to exceed the endowed scholarships of any other secondary school. Peddie also offers opportunities for boys to earn part of their expenses by dining room work.

Kiskiminetas Springs School, Saltsburg, Pa., offers sixty working scholarships. In this number are special grants to sons of ministers, teachers and army and navy officers. Their value ranges from $300 to $650.

Worcester Academy has a varied list which fits many needs. There are thirteen trustee scholarships, each with a stipend of $700; twenty-seven half scholarships valued at $350 each, and seven for day school students, each having a stipend of $200 a year. There are three endowed scholarships for boys displaying skill in Latin. "Our scholarship boys are expected to act as partners with us in running the school, to be free from blame and positively useful in service; and they must pass in their studies," Samuel F. Holmes, the headmaster, explains. "We give them every opportunity by readjustment, of course, to do what we expect. If they are making progress and doing most of their work, we are quite lenient. We have nothing whatever to do with scholarships of the so-called athletic type. We have quite a number of scholarship boys who are also athletes, but they must be good citizens and must be fulfilling requirements; otherwise they cannot hold the aid."



*Despite the fact that twice within six years it was ravaged by fire, Hill School, Pottstown, Pa., has grown to include the large array of buildings and equipment shown by this aerial view. The setting is the Schuylkill valley.*

Hotchkiss School has thirty-four scholarships created by endowed funds, amounting to $51,000.

Cranbrook School is only a few years old, but

it has endowed funds yielding an enviable return in scholarships, the annual total being above $29,000. The school was established in 1926 by George Booth, Detroit newspaper publisher, and is a part of a $15,000,000 gift to education. The scholarship fund is distributed to fit the needs of the candidates and is largely applied to the maintenance of boys who would otherwise have to withdraw.

Groton School, Groton, Mass., one of the most exclusive of boys' schools, has a simple plan by which boys who enter through competition are given certain stipends provided they need assistance. The awards range from $400 to twice that sum; in one instance a full scholarship is given. The aggregate value per year is in excess of $8,500.

Many other schools, particularly in these days of stringency, are proceeding on the principle of giving such assistance as is in their power to keep worthy students in school.

*Some Other Procedures*

The Friends Select School, Philadelphia, largely determines the extent of its scholarships by the current need. Last year it made fifty-eight separate awards, most of them partial. "It is the policy of the school," said Headmaster W. W. Hairland, "not to let pupils who have once made good in the school be withdrawn for reasons purely financial. Most of the scholarships are paid for from endowments; when they are exhausted the school makes grants from its own treasury to enable desirable pupils to continue."

"At a time like this," said another headmaster, "all rules and regulations about scholarships have to go overboard. Boys who had built themselves into our school in past years and whose fathers were having to withdraw them on account of business conditions, have received such scholarships as they needed. Where the school is coming out I don't know, but it seemed to us the only course to take."

The City and Country Day School of New York has contributors for scholarships amounting to one-third of its total budget and it applies a sliding scale of tuition payment. Parents unable to pay full tuition are classified in the sliding scale according to their financial ability. Full scholarships are rarely given in this system.

Another metropolitan school, the Horace Mann School of Teachers College, an experimental school, had a scholarship fund of $2,400 last year allowed by the trustees. Last year this fund was distributed among 180 pupils, elementary as well as preparatory. An allowance of as much as half tuition is exceedingly rare, though R. G. Reynolds, the principal, reports "we have granted that amount in several cases this year because of the unusual situation."

Blair Academy, Blairstown, N. J., which has no scholarship fund but grants certain reductions to sons of ministers, teachers and quite often to others who are considered deserving, devotes about $20,000 to these purposes in normal years, "but," says Dr. Charles H. Breed, headmaster, "just at present we have, of course, been a little more generous."

The Horace Mann School for Boys, Riverdale, N. Y., the boys' preparatory school of Teachers College, has an annual income of about $6,000 which is devoted to scholarships, the beneficiaries of which are always members of families in distinct financial need. In distributing the awards a particular aim is to have them go to boys who are eminently deserving from the point of view of citizenship.

Milton Academy, Milton, Mass., has six independent, established scholarship funds, with annual incomes ranging from $900 to $250, and further funds from which grants may be made to deserving students. The total endowment approximates $40,000. Annual subscriptions from alumni and friends, at the moment somewhat shrunken, are placed in a fund and applied to scholarship needs.

"We have no competition for scholarships, nor do we base the awards on scholarly attainments in the narrow sense, but rather on a combination of scholarly ability with strong character and evidence of high aims and vigorous determination," is the way William L. W. Field, headmaster, explains the Miltonian aims.

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## Should Pupils Proctor in Study Halls?

The attempt to teach self-government through the assignment of administrative responsibilities to pupils involves one of two dangers, according to *School and Society*. Either the pupils develop the habit of mental indifference to social ills because of the futility they experience in possessing "office" without power, or, by being granted power for the proper exercise of which they are insufficiently mature they develop an exaggerated ego, which in later life is just as likely to lead them to the obstruction of the social good as to its enhancement.

From the principal's point of view, the success of such pupil activities depends too frequently on their outward appearance in the attainment of the administrative objective.

# New Angle of Attack Needed in Class Size Research

*Evidence is needed on a host of untouched problems before definite conclusions can be reached on class size, a subject about which there at present is conflict among educators*

By WILLIAM G. CARR, Director, Research Division, National Education Association

THE most important fact about research and the best class size is that research has not yet discovered the best class size. The number of pupils who can be satisfactorily instructed by a single teacher offers a problem that reaches out to touch almost every phase of school administration and teaching. Research has been patiently nibbling around the edges of this problem since 1896. But the problem is large and complex. A good beginning has been made; that is all.

The research that has thus far been brought to a conclusion has, however, revealed two important facts. The first significant conclusion is that classes are growing larger. The average size of classes in senior high schools was twenty in 1914; twenty-seven in 1928;[1] and it is still going up.[2] The same general situation holds true in elementary schools. Current demands for retrenchment in school costs are being answered by increasing class size and decreasing salaries more often than by any other types of adjustment.[3] Studies recently conducted by the National Education Association show clearly that the present trend is to put more pupils in classrooms and to increase the ratio of pupils to teachers. This is a fact of first importance in school finance, in the construction of school buildings, in the planning of curricula and in the choice of methods of teaching.

### *An Arresting Conclusion*

The second major conclusion of the completed research on the class size problem is even more important. A large number of experimental investigations have shown that when other factors are kept as nearly equal as possible, pupils in large classes make as good scores on standardized subject matter tests as do pupils in small classes. The evidence on this point is rather conclusive, and it may be supported by reference to a number of studies carried on during the last twenty years, in various parts of the country, with various subjects and in all grades, from elementary school through college.[4]

The two principal conclusions from research, therefore, are that classes are growing larger and that pupils' scores on standardized tests are about the same whether the pupils are in small classes or in large ones. As long as we stay on this level of indisputable fact, we can avoid differences of opinion. However, as soon as we begin to ask what meaning these facts have for the conduct of schools, many differences of opinion are bound to appear.

### *Personal Opinions Should Be Carefully Weighed*

Perhaps the most facile and common interpretation of the facts thus far revealed by research is that the trend in class size is a wholesome one and that further increases in the size of the class are desirable. A single illustration will serve to place this attitude before us. An official of a local taxpayers' association in discussing ways to cut school budgets recently declared, "Organized education often asserts that the fewer pupils in a class the better the education received. Strange to say, all the evidence received from educational psychology fails to support this conclusion. Children in large classes are found to receive as good, if not better, training as those in small classes."

Little objection could be offered to such conclusions if they were frankly announced as personal opinions. But an attempt to support them by reference to the findings of research is misleading and dangerous. It is most doubtful whether the present findings of research on the class size problem will support the conclusion just quoted. In the first place, a sweeping generalization cannot be successfully supported by a single restricted body of facts —a body of facts that applies only to a small part of the total conclu-

sion which is drawn. In the second place, the conclusion fails to distinguish between the total teaching load and the size of a single class. Before passing on to somewhat more constructive suggestions, it will be necessary to examine the errors which, I believe, are involved in some of the currently accepted conclusions about the best class size.

### *More Evidence Is Needed*

A little knowledge is a dangerous thing, especially when an attempt is made to stretch a limited amount of information so that it will cover up an almost unlimited area of unexplored territory. The studies on class size and achievement have demonstrated that large classes produce good scores on the usual type of pencil and paper test. It seems that the studies have conclusively proved this, but beyond this they seem to have conclusively proved nothing. True, there have been a few minor attempts to explore other aspects of the question. But on the whole it must be confessed that research on the problem of class size has been narrow in its scope, and should therefore be limited in its conclusions.

Before definite policies can be surely stated, we need evidence on a host of almost untouched problems. What is the effect of large classes on the health of pupils? Do pupils in large classes run a greater risk from contagious diseases? What is the effect of large classes on the health and stability of the teacher? What are the effects of more classes or longer class periods on the teacher, the pupils and the instruction? What effect does the large class have upon the timid youngsters, the rowdy, the bully, the precocious child? What effect does the size of the classroom have on the effectiveness of different sizes of classes? Do teachers in small classes know their pupils better than teachers in large classes and, if so, how do they utilize this knowledge? Do parents as a rule prefer to have their children in large or in small classes and what are the reasons for their preferences? What is the effect of class size on the number of failing, retarded or accelerated pupils over a period of years? What are the views of practicing physicians, psychologists and psychiatrists on the class size problem?

Lacking information on these and other urgent questions, it is appropriate that recommendations be modest and cautious. As long as the questions that have just been listed remain substantially unanswered, any statement to the effect that class size is a matter of small educational significance, is merely an opinion and is masquerading if it pretends to be anything else. The value and sincerity of the research already done are readily admitted. Only by such patient and careful studies will our knowledge of the question be expanded. But let us not assume that a continent has been explored when we have merely made a landing on one of its shores. Most of the questions listed above are subject to inquiry. They can no longer be ignored.

There is comparatively little need for further routine studies of the relation between class size and test scores with the usual, stereotyped conclusion that class size is an insignificant factor. Research on class size problems needs a fresh start. The usual conclusion to a paper of this kind is that "more research is needed." This paper, however, varies slightly from that pattern. More research is indeed needed but we need a different kind of research rather than more of the same kind. We need research which approaches its task with a fresh and original viewpoint. It is high time that we began to gather facts on some of the really important and hitherto neglected aspects of class size.

### *Let Us Accept These Facts*

A second major fallacy that lurks in the usual type of conclusion drawn from the evidence on class size involves confusion between the size of a single class and the total load of the teacher. In most of the experimental investigations thus far reported the single class has been the unit studied. No conclusive evidence has yet been offered, even in the limited area of test scores, as to the results of teaching six classes of twenty pupils in a day as compared with teaching six classes of forty pupils in a day. The entire school day during at least a half year of work is the smallest unit that can safely be used for any study of this kind. Teachers usually agree that the long day plus large classes combine to reduce efficiency and increase fatigue. Let it be admitted that great technical difficulties must be met in controlling an experiment that involves a complete school day rather than a single class period. Nevertheless, until such controls are established, the present studies of class size and efficiency will have only a limited application.

Let us admit, therefore, that research has not yet solved the problem of class size; let us admit that it has done no more than make a promising beginning; let us avoid the stereotyped conclusion that class size makes no difference. Let us be ready to say when we are confronted with such a conclusion that it is based upon a type of false reasoning which attaches generalized significance to limited data, and which has only an imperfect connection with the actual conditions found in typical school systems.

A word should be said concerning the increase of class size, which now, due to the reduced funds available for education, marks the school policy in

many cities. No general rule can be laid down that will fit all local situations. If retrenchments in school expenditures are necessary, each local community must decide whether these reductions are to be secured by increasing the size of classes or by some other method. It may well be that in some communities larger classes would be the least harmful type of retrenchment. But if it is decided that the size of class is to be increased as a method of cutting down expenditures, let us not pretend that it is also a measure for securing greater efficiency. Let us frankly admit that it is a necessary retrenchment, of doubtful educational value; let us be honest enough to say that we are increasing the size of classes because we are compelled to do so by economic necessity; let us confess that research cannot yet give a definite answer to all phases of the class size problem. In the absence of better evidence we may well accept the almost unanimous opinion of experienced teachers that, at least under present school conditions, large classes handicap effective instruction. In a word, let us not distort the findings of educational research to support decisions made necessary by temporary economic difficulties.

### *Must Prove Advantage of Small Classes*

What has been said up to this point should not lead anyone to think that the sole responsibility of classroom teachers, with respect to the class size problem, is to agitate for smaller classes. It is quite the contrary. If we cannot yet prove that large classes are better than small classes, we must remember also that we cannot yet prove the reverse of that proposition. Research has shown unmistakably that classes are growing larger. This tendency constitutes a definite challenge to the teaching profession to discover the most effective methods of working with large groups. The best size of class probably depends in large part on the personality of the individual teacher, the aims of the subject being taught and the particular method of teaching. There is good evidence that a definite gain in test scores occurs when the teacher's methods are consciously adapted to the size of the class.

Nor is responsibility limited to those teachers who are instructing large classes. In spite of the general tendency to increase class size, many small classes may still be found in American public schools. Teachers who have these small classes face a problem of method which is just as urgent as that mentioned with respect to large classes. We commonly assert that small classes permit greater attention to individual needs. This assertion has been definitely challenged. If we honestly believe in small classes we must prove and not merely assert the advantages to be derived from this kind of organization. Small classes cost the taxpayer more money per pupil than large classes. It is imperative, therefore, that teachers with small classes handle them in such fashion as to secure all possible advantages to the pupils.

### *Four Ways of Lightening Teacher Load*

Perhaps the final solution of the problem of large or small classes will be a compromise between two extremes. The exhibit school for A Century of Progress Exposition in Chicago next year has been laid out on a principle of flexibility. There are large classrooms, 62 feet by 22 feet; there are two sizes of smaller classrooms and still smaller workrooms for individual study, which are only 16 feet by 11 feet.[5] When this building is in operation it may suggest certain types of school work which can be carried on effectively with large groups and certain other types which can best be carried on with small groups of pupils.

Perhaps in the future, school children will spend part of their time in groups that will be even smaller than the smallest classes today, and the rest of their time in units much larger than our largest classes. Whatever the future may hold, those teachers will contribute most to the advancement of education who retain an open mind on the whole question of class size and who attempt to find in their own procedures the methods best adapted to their own classes.

Teachers should also be aware of the administrative problems involved in the adjustment of the teaching load. As a practical administrative proposition there are only four apparent ways of lightening the total load of the teachers in a given school system. The first method would be the reduction of educational services, either by excluding some pupils from school or by abandoning certain types of educational opportunity. This option is repugnant not only to the American ideal of a complete and democratic school system but also to the general opinion of the public and parents and to the professional views of most teachers.

A second option involves the obtaining of more money for education, whereupon the number of teachers and the number of classrooms may be proportionately increased. This second option is scarcely a possibility in most communities during the present economic situation. The third method calls for the appointment of more teachers with present budgets retained. This means that the total salary budget must then be divided among more persons and that the salaries of all must be reduced in proportion. The fourth choice is to leave the number of teachers and pupils as it is and to seek every possible method for lightening the teachers' load through administrative adjust-

ments. There are doubtless many schools where such adjustments could be put into effect with advantage to the educational program as a whole and with real relief to the teaching staff.

Such changes must to a large extent be worked out locally, but the following may serve as suggestions:[6]

1. Give teachers clerical help for letters relating to school business.
2. Supervise the janitorial work so that the teachers need not be responsible for keeping the room clean.
3. Print and simplify all notices, school reports and similar materials.
4. Provide all teaching equipment well in advance of the date of actual use.
5. Eliminate short periods of five or ten minutes at the opening and closing of schools.
6. Distribute responsibility for extracurricular activities evenly among the entire school faculty.
7. Arrange for voluntary pupil assistance in laboratory and library work.
8. Provide substitute teachers promptly so that a regular teacher will not have to assume the work of an absent teacher.
9. Remove from regular classes those children who present special problems.
10. Provide facilities for mimeographing material needed for instruction.
11. Avoid unnecessary teachers' meetings.
12. Reduce to a minimum all interferences with the usual daily schedule.
13. Protect teachers against unwarranted criticism from parents.
14. Help teachers to discover time saving methods for grading papers.
15. Reduce the number of different daily subject preparations per teacher.

### *Lack of Information Causes Conflict*

The problem of class size involves, however, more than the mere adjustment of teaching methods or of administrative policies. If we carry the study of the problem back far enough we shall see that it touches the very purpose of organized schools in our society. When schools existed merely to give a simple training in the three R's, Joseph Lancaster and his disciples could, with apparent success, herd 600 or more children into a single barnlike classroom and march them through a brief and dogmatic curriculum. Is the purpose of the modern school merely to impart a certain body of information and to build up certain routine skills? Or, shall it accept for its primary goal the guidance of child growth in personality and character? The conflict between these two points of view is due in part no doubt to lack of information which in time may be supplied by the proper kind of research. But the conflict is due also to radically divergent educational philosophies which may never be completely reconciled.

One large group of educational leaders insists that education is an individual matter, and that mass education is not only unwise but an absurd contradiction in terms. The educational philosophy of this group urges us to study the individual pupil, his abilities, his interests, his needs and his hopes. It demands, in short, those advantages which the so-called exclusive private schools claim to provide.

### *And There the Controversy Stands*

More or less in opposition to this group of educators are those whom, for lack of a better term, we may call realists. This group relies heavily upon the controlled experiments already mentioned. These experiments have been concerned solely or primarily with achievement in subject matter as measured by standardized tests. However, as yet we know next to nothing about the relative efficiency of large and small class instruction as far as the health, ideals, attitudes, emotions and habits of thought of individual pupils are concerned. The realists are inclined to be skeptical concerning many of these education outcomes and to infer that changes in pupils which have not been objectively measured, probably do not exist. The individualists, on the other hand, stoutly refuse to accept the acquisition of textbook knowledge as the proper measure of a real education. And there the controversy stands.

Meanwhile the great mass of the public, with a bland disregard for academic issues, makes three demands on the schools: train more pupils; train them better; do it all more cheaply. Quantity, quality and economy are today the watchwords of the public in education, as in business and industry. The teacher's load means something very definite and very real to anyone who is a teacher or who has ever been one. But the average man in the street is probably inclined to deny the very existence of a teaching load in any measurable amount. He thinks of teaching as one of the world's "soft" jobs.[7]

*References*

[1]Hudelson, Earl., Class Size Opinions, Evidence, and Policies in Secondary Schools, North Central Association Quarterly, Sept., 1929, p. 196.
[2]Size of Class in Forty-Seven Cities Over 100,000 in Population, Educational Research Service of the N. E. A., Circular No. 1, 1931. Size of Class in 101 Cities 30,000 to 100,000 in Population and Fifty-Six Cities Under 30,000 in Population, Educational Research Service of the N. E. A., Circular No. 6, 1931.
[3]Some Trends in City School Finance, 1932-33, Educational Research Service of the N. E. A., Circular No. 5, 1932.
[4]Smith, Dora V., Class Size in High School English, University of Minnesota Press, 1931, Chap. 2.
[5]Exhibit School for Chicago World's Fair, Journal of the National Education Association, June, 1932, p. 198.
[6]Lewis, Ervin Eugene, Personnel Problems of the Teaching Staff, Century Co., New York, 1925, p. 243.
[7]Read before the meeting of the National Education Association, Atlantic City, N. J.

# A Montana High School Goes Modernistic

*On the rolling prairie stands the new Shelby High School whose architectural treatment reflects the pioneer spirit of the community—simple, straightforward, impressive and charming*

By FRED A. BRINKMAN, A.I.A., Kalispell, Mont.

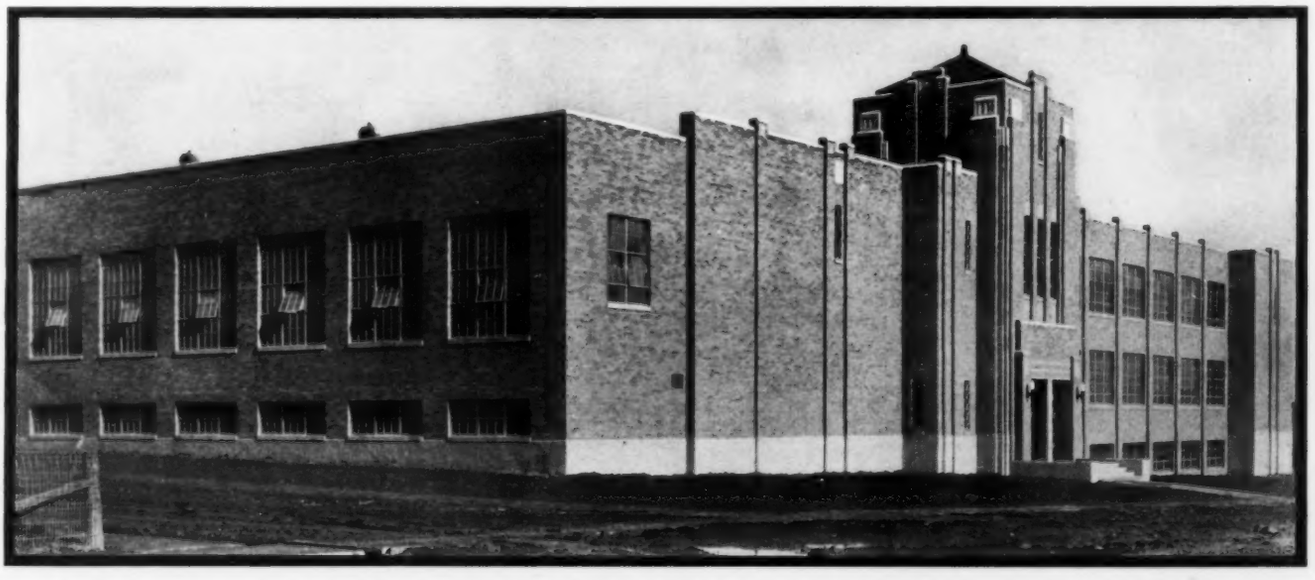
THE casual traveler through Montana is impressed by the fact that nearly every hamlet, however small, boasts of a substantial brick school building. This is a significant indication of the interest in education shown by the citizenship of this, the third largest state, with its population of approximately 500,000 persons. Even in the face of the present business depression, bonds continue to be voted for the construction of new school buildings. The result is the simultaneous attainment of two important objectives—adequate provision for education and the relief of unemployment.

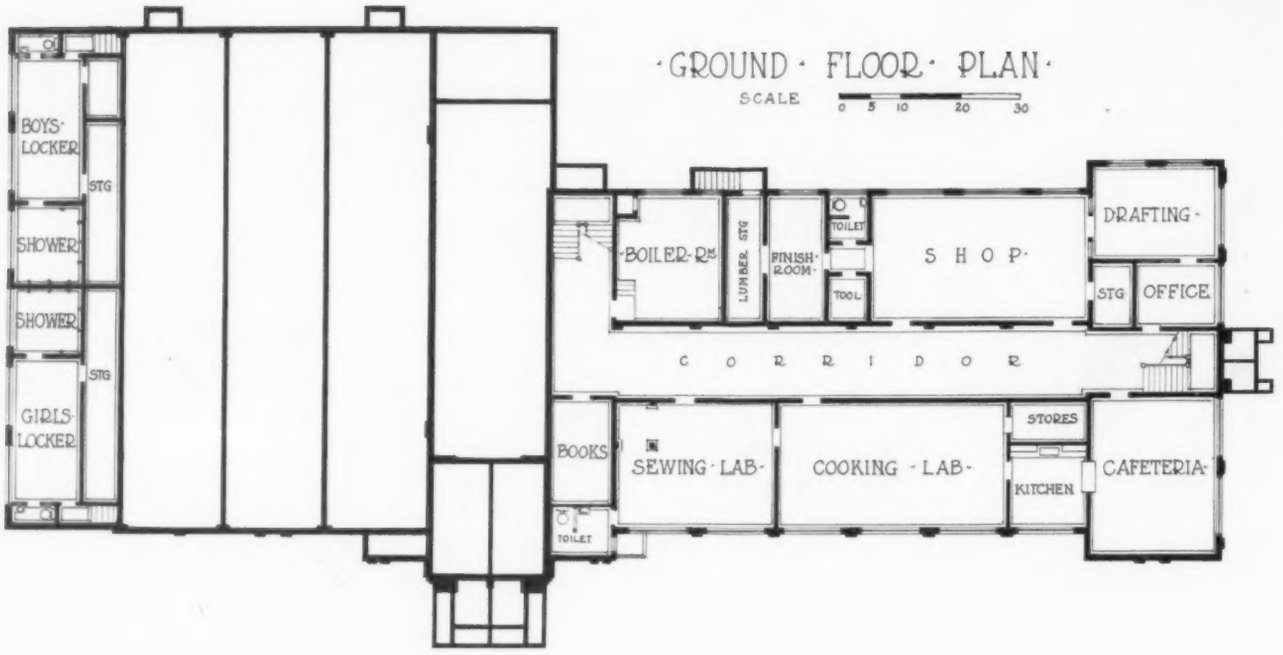
The new Shelby High School, Shelby, Mont., is located on the rolling prairie of western Montana near the eastern base of the Rocky Mountains. Something of the inspiring nature of the location, together with the pioneer spirit of the community, has been incorporated in the design of the building. The three-story edifice of light variegated face brick is characterized by a modernistic architectural treatment, with vertical piers pointing upward on the face of the building and a setback tower dominating the eastern façade. Aluminum grilles and cream colored plaques afford a pleasing contrast to the variegated pink brick walls and the red roof of the tower. The slender tracery of the steel sash further emphasizes the sharp crisp vertical shadows of the piers and gives a well defined scale to the building.

### *School Colors Used in Decoration Scheme*

The color scheme, both on the exterior and interior, carries out the school colors, which are maroon and gold. On the interior the spacious lobby is finished with a smooth red brick wainscot and a gold colored acoustic plaster. A modernistic stencil in maroon and gold, the design of which is based on some of the ornaments used by the Blackfeet Indians, marks the transition between the walls and the recessed ceilings. The floor is of a dark red waxed composition bordered with black, and the woodwork is of Philippine mahogany.

The building has been planned as the first unit of an ultimate whole. In the process of adding new units, the eastern front will be made symmetrical,



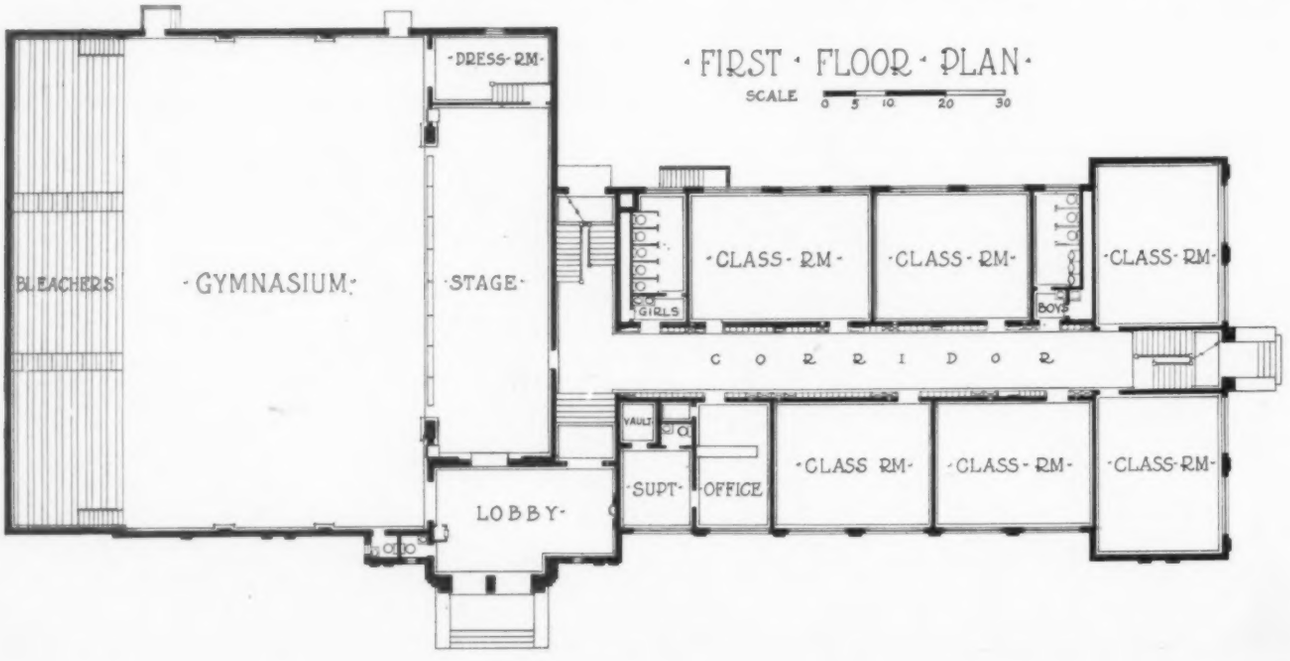



with another tower and a separate auditorium wing to balance the present gymnasium wing. Further extension of classroom space will be possible through additions made at right angles to the eastern front. Meanwhile the esthetic relationships and beauty may be preserved and economy in construction may be maintained.

Due to the sloping site, it was found practical to place the gymnasium, the shower and the locker rooms at the south end of the structure where an abundance of sunlight would be most desirable. The stage could then be placed on the level of the first floor classrooms, which made possible the utilization of the ground floor area for the manual training and home economics departments with practically no excavation. At the same time ample window height was obtained, and the basement rooms are as cheerful and as well lighted as any in the building.

One of the paramount considerations in the plan layout was to make the gymnasium a dual purpose room, accessible to the public at any time without interfering with the regular school program. As a result, a central lobby was provided which serves as a common entrance to the gymnasium and the classroom section but which is isolated from the former by a brick wall and double doors. This arrangement permits the building to be used as a community center even during school hours.

The gymnasium has a playing floor of 51 feet



6 inches by 82 feet and a clear ceiling height of 24 feet. Built-in bleachers accommodate 600 persons and an additional 400 may be seated on removable bleachers on the stage. For auditorium purposes the room will seat a total of 1,300 persons, and the stage, 60 feet by 20 feet, may be used for pageants, plays or special functions. A door at the rear of the stage communicating with the main wing allows the use of any number of classrooms as dressing rooms. The stage has disappearing footlights, border lights, a removable cyclorama and a maroon velours curtain on a traveler track.

In the gymnasium, the walls to a height of 8 feet are finished in smooth red brick with acoustic plaster above. Pilasters embellished with modernistic plaques and the proscenium arch executed in the same manner with alternating bands of red brick and plaster, combine to produce an impressive interior. A striking effect is obtained by the use of recessed circular lights in a ceiling of rough fiber acoustic board, sprayed with gold bronze and laid in ashlar pattern. Shower and locker rooms beneath the bleachers are accessible to the playground through the rear exits of the gymnasium.

The administrative unit on the first floor is convenient to the main entrance and consists of a general office, the superintendent's private office, and a vault. The ceilings of these rooms, and of all others throughout the entire classroom wing, are finished with an insulating acoustic board in bevel tile pattern. This board left in its natural color blends with the neutral silver green walls and the driftwood gray woodwork into a soft color combination that reduces eyestrain to a minimum. A master electric clock in the private office is con-

*The modernistic architectural treatment is emphasized in the view at the right showing the main entrance tower with its setback arrangement and vertical piers. The slender tracery of the steel sash offers a delightful contrast to the sharp shadows cast by the piers. The arrangement of the ground floor is shown by the drawing at the top of the opposite page. Locker and shower rooms for boys and girls adjoin the gymnasium. At the bottom of the opposite page is the first floor plan. The gymnasium, which is equipped with a stage, will seat 1,300 persons.*

nected with secondary clocks in the gymnasium and assembly room. Program gongs, fire alarms and classroom buzzers are controlled from the master clock.

The classrooms are designed for a window area equal to 25 per cent of the floor area of each room. The glass used throughout is of the ultraviolet ray transmitting type and all lighting is unilateral. Most of the classrooms have an east or west exposure which is found desirable because it assures sunlight in each room at least during a portion of the day. Composition blackboards with cork board bulletin panels and removable chalk trough dust trays are provided.

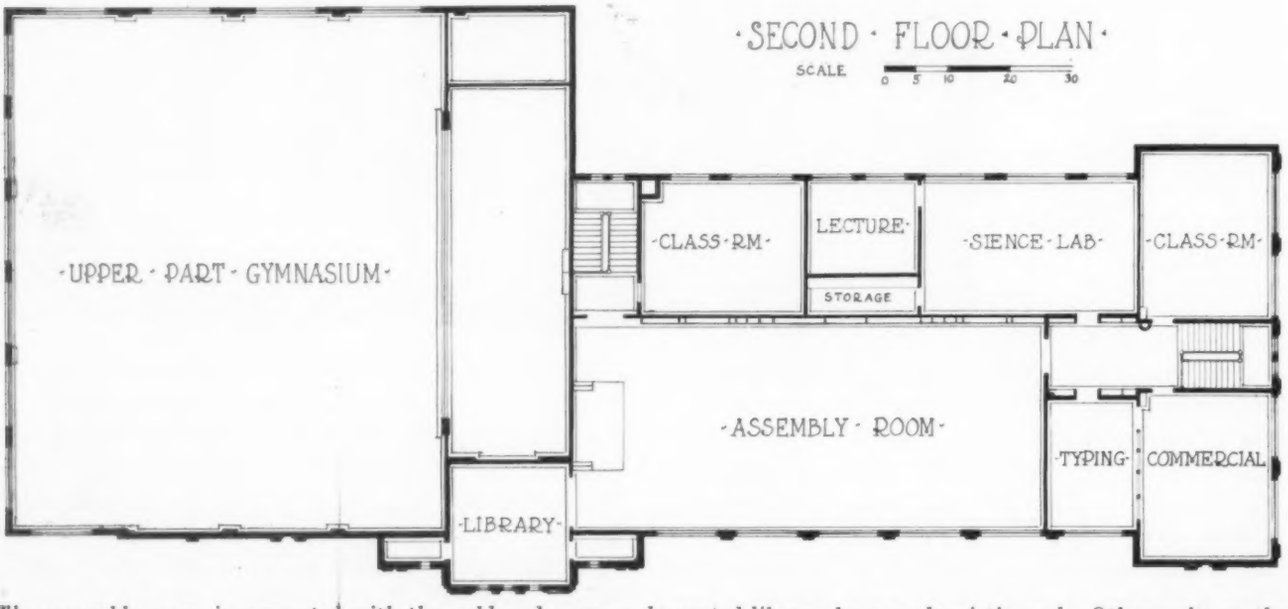
Climatic conditions in this section of Montana are such that skylights are impracticable, but despite the fact that they were eliminated, the assembly room on the second floor is exceptionally well lighted. Pressed lens glass was installed in the upper sections of the steel sash and natural light is thereby diffused and perfectly transmitted to the far side of the room. A beamed ceiling with acoustic board panels and an interesting stencil border makes this one of the most attractive and cheerful rooms in the building. Two display cases with sliding plate glass doors are recessed in the walls and a stage is provided for supervision. The library opens directly off the assembly room and enables one teacher to supervise both rooms. A modernistic arch forms the transition and unfolds a colorful vista into the library, which is decorated in maroon and gold.

Careful consideration has been given to sanitation. All corridors and toilet rooms have waxed composition floors with sanitary cove bases. Window and door jambs have rounded metal corner beads, and individual lockers are recessed in corridor walls. In order to minimize janitor labor, subway foot scrapers are placed flush with concrete slabs at each entrance and exit. All classroom wainscots are finished in smooth troweled hard wall plaster painted a neutral green. The reduction of noise in corridor and stair traffic is accomplished by the use of resilient composition flooring laid on a felt base over the concrete slabs.

Since western Montana is subject to prevailing high winds, gravity ventilation was selected. Foul air is collected in a plenum chamber formed by furring down the first floor corridor ceiling. Turbine ventilators exhaust the air from this chamber through the roof. A hand operated switch in the boiler room opens the dampers of the ventilators through a compressed air line, thus ensuring uniform control of all ventilation.

An appreciable saving in the cost of the building was effected by the use of concealed radiation. Copper heating elements recessed in metal cabinets flush with the walls made possible a reduction of 18 inches in the width of the entire classroom wing, a saving of 2.7 per cent of the cubical contents of this portion. The heating is a vacuum steam system thermostatically controlled. The gymnasium is heated by means of unit fan heaters, two of which are mounted on exterior walls and are provided with by-pass dampers to shut off recirculation and to introduce fresh air directly from out of doors. Natural gas from the local oil fields supplies fuel for the steam boiler, water heaters and the ranges in the home economics department.

The building has an overall length of 203 feet 6 inches and a maximum depth of 84 feet. The exterior walls are of the load bearing masonry




*The assembly room is connected with the gold and maroon decorated library by a modernistic arch. Other units on the second floor are classrooms, science laboratory and commercial department.*

type, and all corridors, stairs and entrances are of fireproof construction. The rest of the building is of mill construction, with steel trusses for the gymnasium roof and steel sash throughout. The tower is covered with a metal roof while the main building has a twenty-year bonded roof of asphalt and gravel.

The design of the building is direct and straightforward. The architectural treatment of the exterior is a frank expression of the plan, and the entire composition, while simple, is charming and impressive. Although inexpensive, the materials of construction are susbtantial and are combined to achieve a proper relationship between beauty and utility. The building contains eight classrooms, two rooms for general science, a manual training room, a cafeteria with a model kitchen, two rooms for home economics, the assembly room, the library and the administrative group. The total volume is 550,000 cubic feet.

Contracts for the construction were awarded September 14, 1931, and the building was formally dedicated May 6, 1932. The general contract, including electric wiring, amounted to $69,400, and the heating and plumbing cost $12,600. The total cost including architectural and engineering fees was $87,000, which is approximately 16 cents a cubic foot.

*The main lobby (above) is attractively decorated. A modernistic stencil in maroon and gold divides the walls from the recessed ceiling. The floor is dark red waxed composition, bordered with black. A view of one of the corridors is shown below. All corridors have waxed composition floors with sanitary cove bases.*

# How Public Schools Reward Teachers for Summer Study

*Of the 848 cities studied, 533 offer definite monetary inducements for their teachers to attend summer school, while 234 penalize teachers for failure to attend occasionally*

By W. E. MADDOCK, Professor of Education and Assistant Director of Summer School, State University of Montana

A STATISTICAL study of the growth of summer school attendance, prepared by the research division of the National Education Association, reveals that the 649 institutions reporting summer school sessions for 1930 had a total enrollment of 421,435 students during that summer. Of these students, 273,494, or slightly less than 65 per cent, were enrolled in courses in education, indicating that approximately this proportion was made up of teachers or of prospective teachers.

The report further states that "estimates based upon the latest and most reliable data available" indicate that the number of teachers, principals, supervisors and administrative officers of schools in the United States and its territories is 942,025. The number of summer school students enrolled in courses in education during the summer of 1930 was 29 per cent of the total number of teachers, principals, supervisors and administrative officers then engaged in school work.

It must not be assumed, however, that all the people who were taking courses in education in the summer schools would be found among the 942,025 who were actually engaged in school work. No doubt some of the summer school students taking courses in education in normal schools, colleges and universities were undergraduates preparing for teaching and taking the courses in education that were required for certification. A smaller number took courses in education as free electives without any intention of preparing to teach.

On the other hand, many teachers attending summer school did not take courses in education at all, but were taking courses related to the fields of work in which they were teaching. As a matter of fact, the financial inducement in the way of bonuses and regular or extra increases in salary which school boards offer for summer school attendance are frequently based on the condition that the teachers shall pursue work related to the respective fields in which they teach. Furthermore, the renewal of certificates and the conversion of certificates from a lower to a higher grade are frequently based on the requirement that the teacher shall present a definite number of credits earned in a standard college or normal school.

### *A Keen Desire for Improvement*

In some of the states, Montana, for example, the teacher has the option of taking either courses in education or courses in other subjects. The number of teachers who take no courses in education while in attendance at summer school is probably much larger than the number of nonteachers taking courses in education. Of course, in the absence of definite data on the subject, one guess is perhaps as good as another. It is highly probable, however, that approximately one-third of all teachers, principals, supervisors and superintendents actively engaged in school work were in attendance at summer schools during the summer of 1930.

All of this represents keen interest in the improvement of teachers in service. This interest is manifested by two groups—the teachers themselves, and the school officials. This article is concerned primarily with the inducements that school boards of cities of various sizes have offered to encourage summer school attendance by the teachers of their respective school systems. The data used in this article were gathered through the office of the president of the State University of Montana. Replies to a questionnaire were received from 848 cities, representing thirty-five states and the District of Columbia.

Of these 848 cities, 556 have a population of from 2,500 to 10,000; 184 have a population of from 10,000 to 30,000; 77 have a population of from 30,000 to 100,000, and 31 have a population of over 100,000.

Of the 848 cities reporting, 251 give a bonus to teachers for summer school attendance. A flat rate is paid to each teacher by 235 cities, as indicated in Table I.

In the remaining 16 cities of this group of 251, the amount of the bonus is determined by calculations on the basis of a certain amount paid for different units, varying in different cities as follows: (1) 10 per cent of the annual salary; (2) the equivalent of one month's pay; (3) $12.50 per semester hour; (4) $12.50 per week in summer school; (5) $10 per major; (6) $6 per Columbia point; (7) $4 per credit.

In the majority of cities there seems to be no definite policy as to how many or how frequently bonuses may be given to a teacher. The number

TABLE I—FLAT RATE PAID TO EACH TEACHER ATTENDING SUMMER SCHOOL BY 235 CITIES

| *Amount paid* | *Number of cities* |
|---|---|
| $150 | 1 |
| 100 | 41 |
| 75 | 18 |
| 60 | 8 |
| 50 | 119 |
| 45 | 14 |
| 40 | 1 |
| 30 | 11 |
| 25 | 19 |
| 20 | 1 |
| 10 | 2 |

of cities reporting a definite policy and the conditions thereof are as follows: (1) 90 cities, each summer indefinitely; (2) 13 cities, every third year; (3) 7 cities, every second year; (4) 6 cities, every fourth year; (5) 4 cities, each year for three years; (6) 2 cities, every fifth year; (7) 3 cities, every year for four years; (8) 2 cities, each year for two years; (9) 1 city, two every five years.

In 91 of the cities giving a bonus on a flat rate basis the amount of work that a teacher must do in summer school is stipulated and varies from two to sixteen credits earned with a passing grade. All numbers from two to sixteen, except the numbers seven, nine and eleven, are used to designate the minimum number of credits a teacher must earn. Six credits are required by 35 cities. Requirements other than so many credits are indicated. Nine cities require the teacher to attend summer school for six weeks, 3 require work in one major and one minor subject, another requires work in three subjects.

Nine cities reimburse the teacher for all or a part of the expenses incurred by attendance at summer school. Others handle this matter as follows: (1) 1 city, all expenses; (2) 1 city, all expenses up to $200; (3) 2 cities, all expenses up to $100; (4) 1 city, all expenses up to $75; (5) 1 city, carfare and tuition up to $100; (6) 1 city, all expenses up to $50; (7) 1 city, all expenses up to $40; (8) 1 city, all expenses up to $30.

Ten cities reimburse the teacher for all or a part of the tuition paid while in attendance at summer school. Others use the following methods: (1) 4 cities, all tuition; (2) 3 cities, one-half the tuition; (3) 1 city, all tuition up to $50; (4) 1 city, all tuition up to $40; (5) 1 city, all tuition up to $25.

### *Must Attend to Keep Jobs*

Provision for increases in salary for teachers who attend summer school is made by 263 cities. Of these, 182 provide for increases in amount as shown in Table II. In 43 of these 182 cities the increase is given for each summer's attendance until the maximum salary is reached. In the remaining 139 of the 182 cities the number of increases is limited. The increases are either given each year that a teacher attends summer school for a limited number of years ranging from one to eight years, or are given once every so often, for example, once in two, three, four or five years, but in no case does it exceed the maximum.

Instead of stipulating an increase of a definite amount, 14 cities provide that the increase shall be "an extra increment" as provided by the salary schedule. Twenty-six cities make provision for a "super maximum" that may be attained either by a graduated scale of so much increase above the general maximum for each summer school attended, or the teacher may by summer school attendance accumulate enough credits to be the equivalent of a year's college work and receive the whole of the supermaximum at one time. This is similar to the conditions of a single salary schedule. Fourteen cities provide that a regular salary increment may at times be received only by attendance at summer school, that is, if a teacher does not attend the regular salary increment is withheld.

In the 27 remaining cities that increase salaries as a reward for summer school attendance, various bases for increase are used. The more important ones are as follows: (1) $150 for sixty credits; (2) $200 for twenty-five credits; (3) $100 for an M.A. degree; (4) $4 per year for each semester hour; (5) $5 per year for each semester hour; (6) $10 per year for each two weeks; (7) $6 per year for each credit; (8) $200 after two summers' attendance; (9) $10 per unit; (10) $15 for six points or one unit.

The amount of work required, as in the case of bonuses, is based chiefly on a minimum number of credits earned. The requirements are so similar to those for bonuses that it would be practically a repetition to list them. Here again six credits is the amount most generally required.

Summer school attendance is a condition of the retention of a teacher's position in 189 cities. Attendance at summer school is required as follows: (1) 3 cities, every year; (2) 14 cities, every second year; (3) 98 cities, every third year; (4) 37 cities, every fourth year; (5) 26 cities, every fifth year;

TABLE II—SALARY INCREASES GRANTED BY 182 SCHOOLS TO TEACHERS WHO ATTEND SUMMER SCHOOL

| *Salary increase* | *Number of cities* |
|---|---|
| $150 | 3 |
| 100 | 37 |
| 90 | 1 |
| 75 | 12 |
| 60 | 7 |
| 50 | 69 |
| 45 | 27 |
| 35 | 2 |
| 30 | 1 |
| 25 | 21 |
| 20 | 2 |

(6) 1 city, every seventh year; (7) 1 city, once every ten years; (8) 1 city, varies with previous training; (9) 1 city, when the teacher needs it; (10) 1 city, teachers with A.B. degree every third year, others every year; (11) 6 cities, no definite time requirements.

The amount of work required of the individual teacher each summer varies and is similar in its variations to the requirements for bonuses and salary increases. Six credits is the usual requirement.

In some cities teachers are classified for various reasons into groups, for example, first, second or third class. Sometimes the classes are designated as A, B and C. In order to be promoted to a higher class, a teacher must merit a higher rating. In 29 cities a higher rating may be earned by the teacher through summer school attendance. The requirements in these 29 cities are as follows: (1) 9 cities, enough credits to secure a degree; (2) 9 cities, no definite amount of work required; (3) 3 cities, from four to six credits; (4) 2 cities, six credits; (5) 1 city, six to ten credits; (6) 1 city, ten semester credits; (7) 1 city, thirty semester credits; (8) 1 city, twelve credits; (9) 1 city, the equivalent of one year's work; (10) 1 city, thirty semester hours.

Sixteen cities require teachers to attend summer school in order to retain a classification once it is attained. In other words, teachers who do not show professional spirit by a willingness to improve themselves by summer school attendance are demoted to a lower class. The amount of work required is, as has been shown for other purposes, usually the earning of so many credits. Unfortunately, no data are at hand indicating how often teachers must attend summer school or be subjected to the penalty of demotion.

Thus of the 848 cities reporting, 533 offer some pecuniary inducement for their teachers to attend summer school and 234 cities exact a penalty from teachers who do not occasionally attend summer school, which ultimately results in a reduction of the financial rewards for their services.

### *Other Rewards for Teachers*

The 142 cities that in one way or another offer financial or other inducements for teachers to attend summer school designate, as follows, directly or indirectly, the institutions that may be attended in order to fulfill requirements: (1) 74 cities, school must be approved; (2) 12 cities, school is recommended; (3) 14 cities, school is prescribed; (4) 33 cities, an accredited school; (5) 6 cities, a degree granting institution; (6) 3 cities, state institutions.

The city school superintendent is usually the one who approves the summer schools although in a few cases the rules require the approval of the school board, but even so, the authority is usually delegated to the superintendent. In the 14 cities where the school is prescribed, the authority in 8 cases rests with the state department of education. In the other 6 cases it is the city superintendent who prescribes. In cases where the state department of education does the prescribing the teacher, by attending summer school, is also satisfying certificate requirements.

Reports were made by 243 cities on methods of selecting teachers' summer school courses. The cities handle this matter as follows: (1) 55 cities, course must be related to teacher's specialty; (2) 118 cities, course must be approved by the superintendent; (3) 24 cities, course is suggested by the superintendent or supervisor; (4) 11 cities, course is prescribed by the superintendent or supervisor; (5) 5 cities, professional courses; (6) 29 cities, elective; (7) 1 city, looking toward a degree.

Bonuses and special salary increases are also given in some of these cities for attendance at regular school sessions as well as at summer schools; for credits earned by correspondence study; for an equivalent amount of time spent in travel, or, where schools and colleges are accessible, for credits earned in evening or Saturday classes at these institutions.

# Making the School Lunchroom Self-Supporting

By CORA K. LOUGHRIDGE, M.D., Director, Department of School Lunches, Louisville, Ky.

DURING the first quarter of the present century school feeding was in the experimental stage. No department of school work has progressed more rapidly than this one. It has gained a permanent place, as is shown by the fact that boards of education include it in their architectural plans for all new school buildings and erect portables in the yards of the old schools that cannot provide a room where lunches can be properly served. This indicates to the intelligent onlooker the soundness of the judgment of those who conducted the experiment.

In the organization of a large department it is always well to begin with the single initial unit and gradually add to it. This unit should be of a type that can be used by either a single school or a large system. A well organized lunch department is a decided asset to any school system. To secure it the board of education in planning its initial unit should have a vision of a real lunchroom, as this is the first stone in the foundation of the department. Any lunchroom will be efficient that is characterized by good organization, standardization, sanitation and cooperation. The lunch department should be entirely separate from the other departments of educational work, such as home economics, general science and physical education, but should cooperate with them. All are striving to improve the health of the pupil, but are working from different angles.

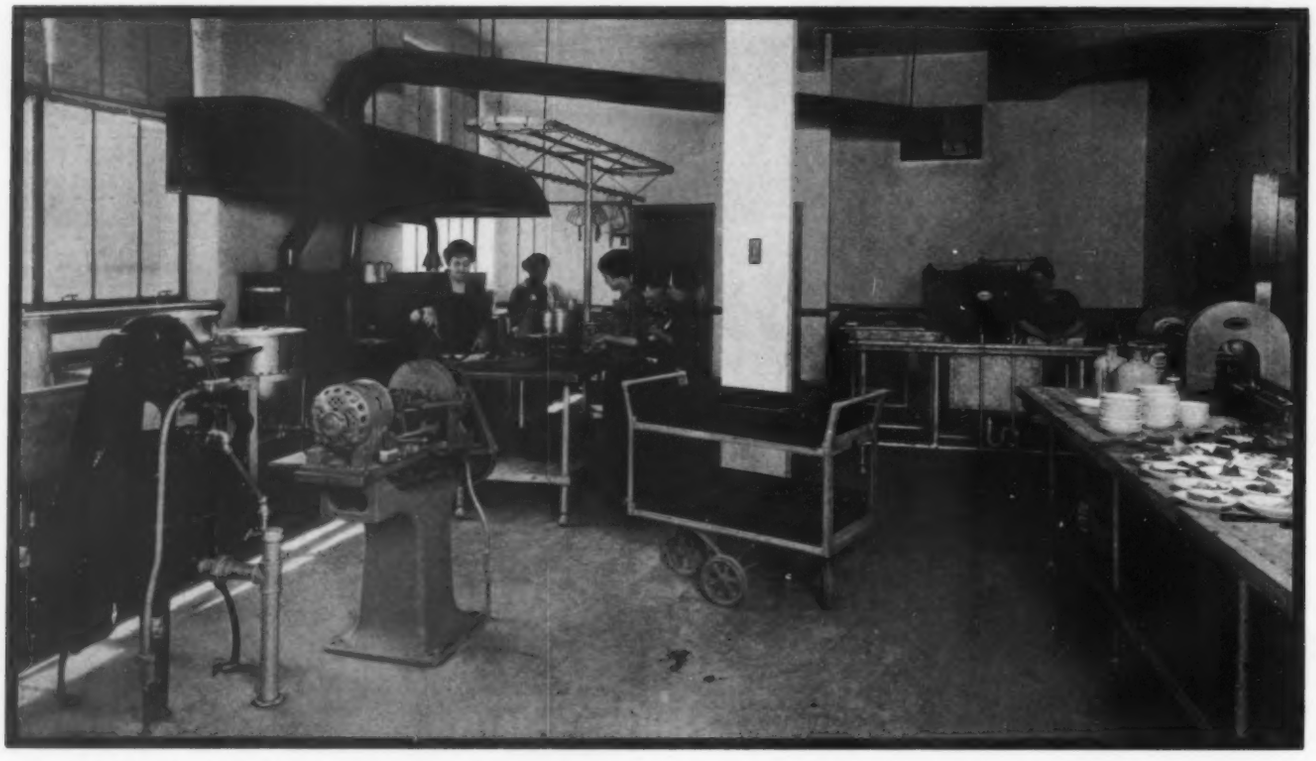
This organized work should be under the control of the board of education. Great care should be taken in the selection of the manager for the initial unit, who, if she proves her ability to manage one school, should become the future director of the department. The director should possess a degree from a recognized college, preferably the degree of a physician, a trained nurse or a dietitian. She should have had practical experience in her chosen profession and should know how to apply theory and facts through the medium of common sense. She should also be endowed with executive ability.

The custom prevailing in some communities of appointing a director because some person of prominence requested her appointment is to be condemned, as is the slogan "Sell food to school children at cost," which is an echo from the past when those who started school lunches allowed their sentiment to overshadow their good judgment. No business operating under such policies can be expected to survive. Raw food, service, the replacement of equipment, all have to be paid for during the first weeks of the opening of the school year. The treasurer has to have money in the bank to meet these legitimate obligations or the department loses its credit.

The treasurer of the board of education should become also the treasurer of the lunch department. The money, of course, should be deposited in the name of the department of school lunches. The treasurer should sign all checks and should have the accounting division under his supervision. One bookkeeper should be employed and clerks to assist can be added as needed. Of course the director supervises all work connected with the system.

When the manager has been selected, the board of education should test her ability by enlisting her aid in the selection of equipment and in the planning of the room to be used for lunchroom purposes. The employing and dismissing of assistants should be left entirely to the director. Any director on whom rests the responsibility for the success or failure of a large department should have a free hand in the employment of her help. She alone is in a position to judge their ability by closely supervising all their work.

The number of assistants to be employed is governed by the receipts per day in the different units, each of which is treated as an individual cafeteria. In the initial unit when the receipts reach ten dollars a day the principal's clerk can be employed as cashier for a small fee per week, plus her daily lunch. When the receipts reach fifteen dollars a day, an assistant can be employed, thus enabling the manager to act as cashier. From this time on every ten dollars added to the daily receipts justifies another assistant, until forty-five dollars a day has been reached, when four can successfully handle an elementary school lunchroom with receipts up to eighty-five dollars a day.



*Senior and junior high schools need up-to-date equipment, such as potato peelers, dishwashing machines, mixers, and slicing machines. The photo shows the equipment at J. M. Atherton High School for Girls, Louisville, Ky.*

Most schools employ their assistants according to the enrollment. This is a mistake as all the pupils do not at any time patronize the cafeteria in a school. If the pupils buying lunches are shown proper attention, at least two-thirds of those enrolled will patronize the lunchroom in normal times. The assistants in junior and senior high schools should be selected from the managers of the elementary schools, thus placing the organization on a merit basis. In the junior high schools nine employees are all that are necessary. The managers' assistants should include two steam table women, two cashiers, one cook, one dishwashing machine operator and two cafeteria girls. Senior high schools may employ as many as seventeen. A two-way steam table arrangement is preferable to a single steam table as the rapidity of moving the lines in these schools has to be taken into consideration or the pupils at the end of the line will not have adequate time to eat.

Proper organization of employees and of work is essential. This gives assurance that every requirement will be smoothly, efficiently and scientifically met and creates a happy atmosphere for the employees to work in, the result being a force of employees always interested in their work.

When the original unit has been completely organized and has been operated for a sufficient time to give assurance to the manager that another lunchroom may be opened, then both schools should have the required assistants with the future director as manager. This arrangement eliminates the expense of a director's salary, but at the same time the manager of the two schools should receive an additional sum as each new unit is added, until she automatically becomes the director with a corresponding increase in salary.

The next step in the organization of the lunchroom is to establish the basic principles that will be of service both to a one-school program or to the largest department in existence. The following are suggested:

First, lunchroom departments should be independent of all other departments but should cooperate with them.

Second, a lunchroom should never be obliged to use makeshift equipment or an unsuitable room.

Third, equipment should be standardized.

Fourth, records should be complete but should not be complicated.

Fifth, salaries of heads of divisions, inspectors, managers and assistants in individual lunchrooms should be standardized.

Sixth, all employees should be paid.

Seventh, all employees should be in the lunchroom at a given time.

Eighth, recipes should be tested.

Ninth, food should be of standard quality; preferably nationally advertised products should be used.

*Although most elementary schools do not conduct lunchrooms, they do need facilities for serving milk to pupils. This picture shows the efficient method of serving employed at John B. McFerran Elementary School, Louisville, Ky.*

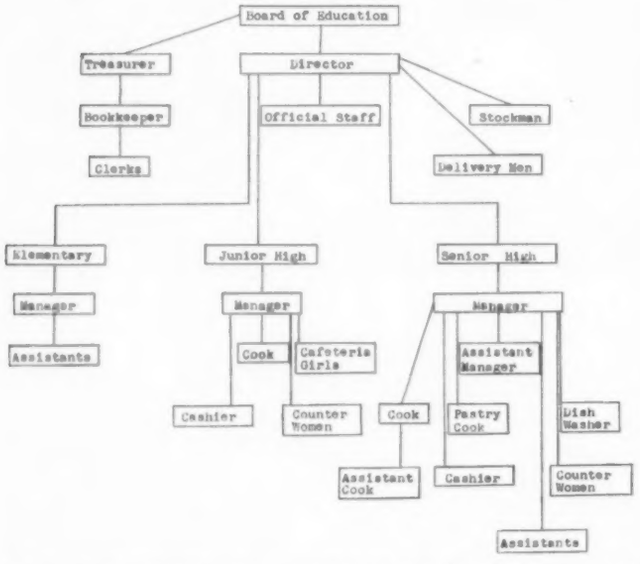
Tenth, selling price of food per portion should be fixed and should not fluctuate.

Eleventh, all employees should pass a strict medical examination.

Twelfth, cooperation with the principal and the faculty should be sought and maintained by the department.

The basic principles should be adhered to but they should be flexible enough to meet the requirements of every feeding problem in the school system. However, the gospel of nutrition has been so well drilled into the school children that they are qualified to choose a well balanced meal with perfect ease and the child of today can give you an intelligent reason for the combination of foods.

All equipment should be standardized, and a brand of proved stability, easily operated and cleaned, should be selected. The aim is to provide the equipment needed to accomplish the work of the day, rather than to equip an up-to-date domestic science kitchen, because this would be too expensive for the beginning of a system in most cities




*Proper organization is essential if the lunch department is to succeed. The author suggests the above organization set-up for the large city lunch department.*

and county districts, and it would not give an opportunity for the employees to acquire skill in certain procedures that are a part of lunchroom work. A simple but scientifically equipped kitchen is a great satisfaction and it results in making the employees happy, which means success.

In establishing a department of school lunches I believe it is best to start with the elementary, then junior high and lastly senior high schools. The equipment needed for all types includes tables, preferably 12 feet long, 30 inches high, 24 inches wide; 18-inch stools, sixteen to a table, as crowding causes children to become unruly and detracts from the dignity of the lunchroom; a stove of standard make, the kind to be left to the judgment of the manager of the first unit.

In elementary and junior high schools the use of white enamel dishes reduces the breakage and makes it possible to replace them at a low cost. In senior high schools, the quality of the china should be the same as is used in commercial restaurants. Knives and forks should be of a quality that will not stain. Wood handles with good nonstaining steel blades and tines will give splendid service and when the receipts are sufficient to justify this, good silver plate may be purchased and the steel cutlery can be taken to the central storeroom for use as kitchen knives and forks, to be redistributed throughout the entire system for the spreading of sandwiches. All employees of lunchrooms should acquire the ability to slice both bread and meat in a scientific manner.

Senior and junior high schools require more help than elementary schools. They should have up-to-date equipment, such as potato peelers, dishwashing machines, mixers and bread slicing machines. If possible these should be purchased by the department. All lunch departments should be self-supporting whether they are composed of one unit or one hundred units. Senior high schools require larger equipment and a greater quantity of it, but it must be of the same high standard.

All cooking utensils should be of standard quality and there should be enough for the service but not so much that a disorderly kitchen will result.

Standardization of food is the next step. Always good wholesome food should be served and it will be found of advantage to secure a good quality of nationally advertised goods. This obviates criticism, as the parents are familiar with the advertisements in the magazines. The canners establish their own standard and have to live up to it. If the initial lunch unit is in a poor district of the city, the manager will be obliged to purchase the best brand she can with the money at her command. If the school is in the South she has the advantage of being able to buy fresh fruit and vegetables cheaply all winter. When the department is finally established the same food should be provided for all schools and the system as a whole should carry the weaker ones.

In all elementary and junior high schools nothing should be served that has not been approved by the nutrition workers. This helps the science supervisors and teachers in their efforts to spread valuable information through the medium of the child. Senior high schools can be reached only in this manner, by educating the child. If the faculties could be persuaded once a day to eat the menus prescribed for the children, the directors and managers of the lunch departments in senior high

*Speedy, courteous service will increase the lunchroom patronage. A modern steam table speeds-up service and gives everyone in line adequate time to eat. This picture was taken at Shawnee Junior High School, Louisville, Ky.*

schools would have less difficulty. Not only should the raw material be standardized but also the preparation of it and the mode of serving. The food partaken of in the different schools will vary according to the districts from which the pupils come. Racial and religious differences have to be taken into consideration. These are considered and provided for by an efficient manager.

Prices should be stabilized and should not fluctuate. This is true also of the portions. A lunchroom in any system should be typical of the entire system.

Every school lunchroom should be kept spotless. There should be employees in white uniforms, white tables, a bright stove, a clean kitchen floor, clean cabinets, arranged in order with each kind of food placed together, clean walls, corners and screens. This can be accomplished only by the teamwork of the employees. A happy working force, cheerfully performing its duties, with the desire to have the lunchrooms grow in efficiency, is essential.

The division of sanitation ought to come into existence when the department includes as many as fifteen schools. At the same time the food and delivery divisions take form, with one person in each division, these to become the heads of the divisions when it becomes necessary to add assistants. Sanitation has become an important factor in cafeteria work. The cooperation of the state and city health departments is given in the inspecting of manufacturing plants, provision and produce houses, dairies and every branch of business that provides food. In school lunchrooms the sanitation should be of the type that will stand the acid test of criticism by clubs, parent-teachers' associations and similar organizations.

If the one unit or a large department is to be operated successfully cooperation is essential. First, there must be internal cooperation between the director, the official staff, the managers, the assistants, and the bookkeeping and delivery divisions. Second, cooperation should exist between the lunch department and all other departments of the school. In some cities the department of school lunches has become a well organized business, an educational feature, a health activity center and this fact has led to its great success. Unless the cooperation of principals and faculties is won failure will result.

As the department grows the official staff, composed of the heads of the different divisions of the department, will take its rightful place. Thus the expansion of the department will be gradual and there will be no confusion in the transition period. In a unified system, a healthy competition between the different units promotes the success of any department.

# What Is Gained by Designing Your Own Report Cards

*Here is a plan for school workers who find it a bother to prepare report cards and mark grades and who favor the abandonment of record systems in schools*

By SAMUEL ENGLE BURR, Superintendent of Schools, Glendale, Ohio

THE preparation of report cards is a bother and many school workers have wished at one time or another that report cards, marks, grades, units of credit and the whole child accounting system in general might be discontinued in their schools.

Although in Glendale, Ohio, we have a "progressive" school system, we do not favor any abandonment of child accounting. We do feel, however, that records and reports should be more flexible in their nature and that they should be more adjustable to individual needs. We believe that such an objective is more in harmony with truly progressive ideals than would be the abandonment of record systems in general.

In order to make an actual start toward the objective we have in view, we have replaced the commercial report card formerly used in our school

REPORT TO PARENTS AS TO WORK OF PUPILS

REPORT FOR FIRST SIX WEEKS OF THE 1930-31 SCHOOL YEAR

Name of Pupil.....

Present Grade Placement.....

As a general summary of this pupil's school accomplishment during the first marking period, I would rate it as satisfactory, fair, unsatisfactory, and as a general summary of conduct or citizenship, I would rate it as satisfactory, fair, unsatisfactory.

It is our feeling, on the basis of the evidence now available, that this pupil's work is better than, about the same as, not so good as, what we might reasonably expect.

In terms of percentages, with 70% representing a passing grade, the various subjects are rated as follows:

1..... 6.....

2..... 7.....

3..... 8.....

4..... 9.....

5..... 10.....

This report is made in duplicate, one copy going to the home and the other to the Superintendent of Schools. The copy sent to the home has no erasures or corrections on it. If any erasures or corrections are noted, the entire card should be returned to the school and a new one will be issued in its place.

Signed.....
Home Room Teacher

[ Detach Here ]

This space may be used for remarks or criticisms

REPORT TO PARENTS AS TO WORK OF PUPILS

REPORT FOR SECOND SIX WEEKS OF THE 1930-31 SCHOOL YEAR

Name of Pupil.....

Present Grade Placement.....

On every school day, some important piece of work is done in class. Absence from class handicaps the pupil. This pupil has been absent.....days during the second marking period and has been late at school for.....sessions.

As a general rating of this pupil's conduct and citizenship, including attitude toward school work, toward other pupils and toward the teachers, the mark is satisfactory, fair, unsatisfactory.

In terms of percentage, the accomplishment of this pupil in the work which has been covered during this marking period is as follows:

1..... 6.....

2..... 7.....

3..... 8.....

4..... 9.....

5..... 10.....

(For secondary school pupils only). This pupil is—is not doing work of such quality as to merit our recommendation for college entrance.

Signed.....
Home Room Teacher

[ Detach here ]

*At the left is a reproduction of the work report sent to parents at the end of the first six weeks of school. The report for the second six weeks is reproduced above. Letters on the back of each card call attention to the need for close cooperation between home and school.*

system with a series of reports of our own design.

Our old report cards were of the familiar type which provide for entering a mark or grade opposite various subject matter fields and character traits at several stated times during the school year. Each time the card was signed by the parent and returned to the teacher. The cards themselves were exactly the same from month to month of course, and all pupils had exactly the same type of card.

It is our feeling that both of these conditions are undesirable. We feel that during different

### Supplementary Calendar of Marking Periods, School Year 1931-32

Tuesday, Sept. 15, 1931—School work starts.
Friday, Oct. 16, 1931—First marking period ends. There are 24 teaching days in first marking period.
Thursday, Nov. 26, 1931—Second marking period ends. There are 28 teaching days in second marking period.
Wednesday, Dec. 23, 1931—Third marking period ends. There are 18 teaching days in third marking period.
Friday, Jan. 29, 1932—Fourth marking period ends for high school. There are 20 teaching days in fourth high school marking period.
Monday, Feb. 1, 1932—High school exam week begins.
Friday, Feb. 5, 1932—High school exam week ends. There are 5 exam days for high school.
Friday, Feb. 5, 1932—Fourth marking period ends for elementary schools. There are 25 teaching days in fourth elementary school marking period.
Thursday, March 24, 1932—Fifth marking period ends. There are 33 teaching days in fifth marking period.
Friday, May 13, 1932—Sixth marking period ends. There are 30 teaching days in sixth marking period.
Thursday, June 16, 1932—Seventh marking period ends. There are 23 teaching days in seventh marking period.
Friday, June 17, 1932—Schools close.

marking periods, different accomplishments and different traits need emphasis and that at any time, different children need to be marked in widely differing fields.

We have experimented with a report card which will overcome the first difficulty, which will enable

*The letter appearing on the back of the report for the third six weeks of school, and after the mid-year examinations, is reproduced at the top of the page. At the bottom is the card for the fifth six weeks. The letter on the back of this card urges attendance at parent-teacher meetings.*

GLENDALE PUBLIC SCHOOLS
GLENDALE, OHIO

**Report to Parents as to Work of Pupils in the Secondary School.**

To Parents or Guardians:

In most of the affairs of life we need to check up or to take an inventory from time to time. Each month, we balance our bank accounts, each year our business houses take an account of the stock on hand. The purpose is not only to learn what the condition is, but to determine what steps may or may not be taken in order to build upon the present condition.

I believe that we should balance our accounts or take an inventory in school, too. Consequently we use various forms of examinations, tests and measurements from time to time at school. As in business, our purpose is larger than the mere desire to see what the school conditions are. The examination results are used to guide us in the choice of the next steps to be taken in our school work.

Our examinations have another value, too. In our everyday life today, examinations and tests are being used more and more. In many states it is necessary to pass a written examination in order to secure an automobile driver's license. Examinations must be passed in order to secure civil service jobs. College entrance depends upon the passing of examinations, in many instances. Taking exams in school prepares pupils to meet such situations out of school.

In our secondary grades, we have just been giving a series of examinations. The results are included in this report. We are also making other tests and measurements of our school progress. These tests and measurements are a part of a general survey of our present school conditions and needs. In our Public School Bulletin we shall tell you about the results.

If you would like to read of a complete survey which has been made in another school system which is comparable with ours, I recommend "The Report of the Survey of the Schools of Maple Heights, Ohio" by Strayer, Engelhardt and others, published by the Bureau of Publications of Teachers College, Columbia University, New York City, 1930. We have copies of this survey report at the school.

Samuel Eagle Burr

JANUARY 23, 1931 Superintendent of Schools

[ Detach Here ]

To the Teacher:

I have received the report upon ..... work for the third marking period of 1930-31 and have noted its contents.

Signed .....
Parent or Guardian

REPORT TO PARENTS AS TO WORK OF PUPILS

REPORT FOR FIFTH SIX WEEKS PERIOD OF THE 1930-31 SCHOOL YEAR

Name of Pupil .....

Grade Placement .....

Days Present ..... Days Absent ..... Times Tardy .....

| | | | | | |
|---|---|---|---|---|---|
| Study Habits: | Excellent | Good | Average | Fair | Poor |
| Politeness: | Excellent | Good | Average | Fair | Poor |
| Co-operation: | Excellent | Good | Average | Fair | Poor |
| Accomplishment: | Excellent | Good | Average | Fair | Poor |

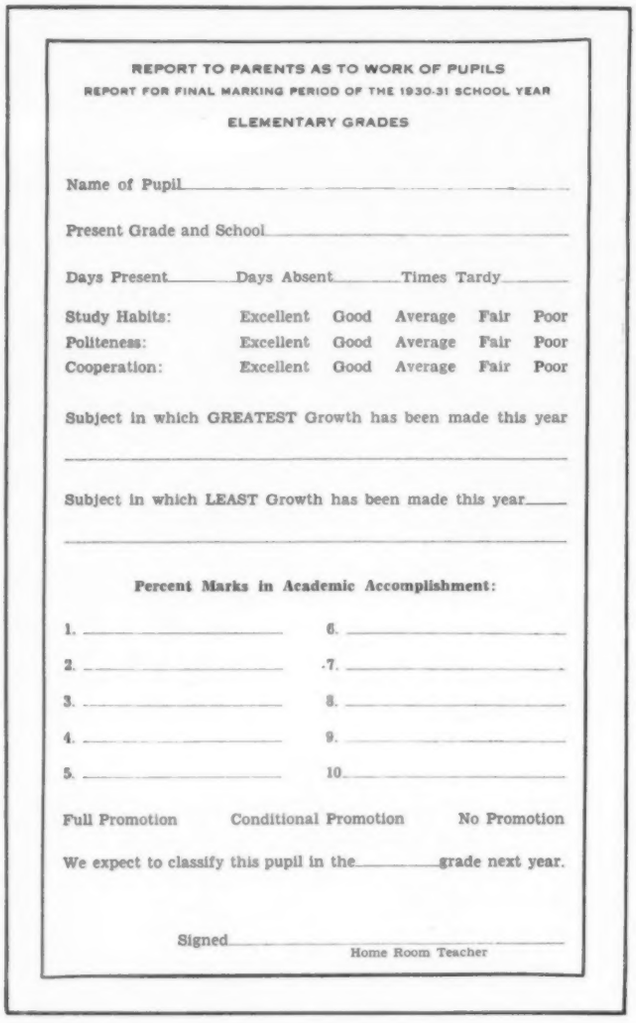
Percent Marks in Academic Accomplishment:

1. ..... 6. .....
2. ..... 7. .....
3. ..... 8. .....
4. ..... 9. .....
5. ..... 10. .....

Signed .....
Home Room Teacher

[ Detach here ]

us to emphasize different aspects of our school work from time to time, as emphasis upon this or that seems necessary. We still have before us the problem of meeting individual needs—the best suggestion that has been made being that we should continue the general use of the type of card we have now and supplement this by a personal letter from the home room teacher to the parents of each



REPORT TO PARENTS AS TO WORK OF PUPILS
REPORT FOR FINAL MARKING PERIOD OF THE 1930-31 SCHOOL YEAR
ELEMENTARY GRADES

Name of Pupil_____

Present Grade and School_____

Days Present_____ Days Absent_____ Times Tardy_____

| | | | | | |
|---|---|---|---|---|---|
| Study Habits: | Excellent | Good | Average | Fair | Poor |
| Politeness: | Excellent | Good | Average | Fair | Poor |
| Cooperation: | Excellent | Good | Average | Fair | Poor |

Subject in which GREATEST Growth has been made this year

_____

Subject in which LEAST Growth has been made this year_____

_____

**Percent Marks in Academic Accomplishment:**

1. _____ 6. _____
2. _____ 7. _____
3. _____ 8. _____
4. _____ 9. _____
5. _____ 10. _____

Full Promotion Conditional Promotion No Promotion

We expect to classify this pupil in the_____grade next year.

Signed_____
Home Room Teacher

*This is the card used for the final marking period. The letter on the back explains the basis of promotion.*

pupil. Of course this is going to involve a considerable amount of work, but perhaps such an individual letter to all parents would be needed only two or three times a year and then it would not be necessary to mail all of them on the same day.

We believe that the samples of report cards, reprinted here, are largely self-explanatory. During the school year 1930-31, the cards were printed and issued every six weeks, but as this was unnatural and formal, we are dividing the school year more naturally. The calendar used for issuing the cards during 1931-32 is presented here also. Later, we expect to abandon the prearranged time schedule and issue cards as the need arises.

The sample cards[1] presented here will indicate the way in which this experiment has developed. On one side of the card (size 5 by 8 inches) is a letter to the parents from the superintendent of schools or from the principals of the various schools. This deals with matters of current interest or it explains certain features of the work which are named on the reverse side of the card.

The body of the card is retained by the parents and a duplicate is filed in the office of the superintendent. Each card bears a stub, which is to be signed and returned to the school to indicate that the card has been received by the parents. On the reverse side, this stub has a space for remarks by the parents. At first, this opportunity for remarks and criticisms was seldom used. As we have continued to extend this opportunity, however, it has been accepted more and more. In our elementary grades about one-third of the parents are now writing brief notes to the teachers in this space—and most of them are notes of commendation and support. In the secondary grades, however, we still get little response.

Some have asked about the expense of our plan. Of course it is more expensive than the old card which lasted for a full year, but we believe that it is money well spent and that it is more than worth the increased cost.

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## Quick Facts About Colleges

The American Council on Education's *American College and Universities* has appeared in its second edition. The new edition, produced under a subvention of the General Education Board, is considerably enlarged. It contains the salient facts about accredited institutions of higher learning. The catalogue facts, name, address, control, entrance requirements, departments, equipment, endowment, tuition fee, degrees, publications and other matter of a like nature are accurately compiled from the college catalogues.

The book, which was edited by Dr. John Henry MacCracken, falls into three divisions. The first 300 pages contain a review of the American college and university, covering a multitude of topics. The bulk of the book, pages 300 to 1,000, presents the statistics on 521 institutions of higher learning. The last 100 pages of appendixes present the accredited lists of the various regional associations, important facts concerning foundations and fellowships and lists of colleges, classified under various headings.

[1]These report cards have seen actual use in the Glendale Public Schools, Glendale, Ohio, and are reproduced from the manuscript copy of the First Year Book of the Glendale Public Schools, 1930-31 by Samuel Engle Burr.

# Making an Asset of the Mentally Retarded Child

*How the backward school child may be developed to the highest possible degree and thus may become a useful citizen is told here*

By FREDERICK L. PATRY, M.D., Neuropsychiatrist, University of the State of New York

IT HAS been said that it takes all sorts of persons to make a world. It is also true that all types of children arrive at the threshold of schools each year. This is in response to the present generous American philosophy of education—equal opportunity for all children to the extent of their capacities, their adaptabilities and their needs.

It is well known that in the larger centers of population and in certain consolidated school sections special classes have been organized for the crippled, open air classes and schools for the undernourished and those predisposed to certain diseases, classes for the near blind and near deaf and for those with speech and other defects. These have proved a blessing to the unfortunate pupil by shaping school facilities, or creating them, to meet his special needs. The practice has also resulted in saving thousands of dollars in taxes. Many of these pupils are thus spared needless and costly repetition of classes. They are given fundamental training in ed-

ucation and citizenship and special skills to help them to become self-supporting.

In like manner we find children with all varieties of intellectual abilities and disabilities. These may not be so obvious as in the case of the cripple or the blind child, but nevertheless it is important to recognize them as soon as possible. Such children also need special school content and methods to meet their limitations.

### *State Laws Require Special Classes*

The question might well be asked, "How frequently do we encounter children with varying degrees of intellectual capacity below that of the so-called normal or average child?" Professor H. H. Goddard, Ohio State University, states that 10 per cent of the school children have not the intellectual capacity to go beyond the fourth grade; that another 15 per cent cannot progress beyond the fifth grade of the formal or traditional curriculum. These figures correspond to those based on a survey of certain schools in Baltimore made by Dr. C. Macfie Campbell. He found that at least 10 per cent of the children in that district were not suited to any public school curriculum, and that another 15 per cent needed a curriculum adapted to their endowment. In Massachusetts it was found that 1 per cent of the public school children can be taught only in special classes.

The organization of special classes for the mentally retarded has had an encouraging history, in keeping with the tenets of our educational policy of equal opportunity for the various types of handicapped children as well as for normal children. In 1874 there were established in New York City special classes for backward children, primarily for those boys who were truants or incorrigible. In 1894 Providence, R. I., established a class for mentally deficient pupils. The first state law requiring special education for backward children was passed in New Jersey in 1911. New York State followed suit in 1917. In 1918 there were about fifty such classes, by 1926 there were 180 and in 1929 there were more than 320 in that state, exclusive of New York City. The latter city had 410 classes in 1929. Since then there has been a steady growth which seems likely to continue for many years to come.

Most states now have laws making it obligatory to establish a special class where there are ten or more pupils who exhibit three or more years of retardation in mental development. The New York State education law states that the board of education of each city and of each union free school district in which there are ten or more children retarded in mental development shall establish such special classes. In the event that there are less than ten such children in a school district, a contract may be made with the board of another district for the education of such children in special classes, organized in the schools of the city or district where such contract is made. Moreover, the state pays an amount equal to one-half the salary paid by the local city or district board, provided the teacher has a certificate issued by the commissioner of education authorizing her to teach such special classes.

These children are selected for a special class on the basis of the age-grade table and other factors. Pupils who are two or more years over age for their grade are noted. Other determining factors are the teacher's recommendation based on the pupil's school record and behavior, group and individual intelligence tests, social adaptability, the home condition, and the child's physical health as revealed by a thorough medical examination.

It is particularly important to realize that various forms of physical defects or disease might cause an apparent or real retardation in school performance. Thus each child who is not progressing at the average rate should have a careful physical examination to reveal any physical contributing causes. Defects of hearing and vision are frequently found, as well as diseased tonsils and adenoids, carious teeth and malnutrition. After these physical drains are removed, the child often can comfortably keep up with the average pupils, or even surpass them.

### *Their Social Impulses Are Normal*

Of equal importance to the physical examination in considering a child for special class placement, is the condition of the child's out-of-school environment, especially the neighborhood and home. An unhygienic, highly charged emotional home atmosphere almost invariably retards the pupil's progress in school. Unwholesome living conditions or sleeping arrangements, inadequate diet, parental disharmony and strife are bound to react unfavorably on the child's adjustment to school life. These foci of infection must be cleared up. When such action has been taken, there is invariably an obvious improvement in the pupil's ability to adjust himself to school life.

Special classes for the mentally retarded are not organized at present for the so-called truant or incorrigible unless his behavior is associated with mental defects. Similarly, various types of physically handicapped children of average intellectual capacity should not be placed in special classes.

Since backward pupils require more individual

*Playtime is a special class at State Normal and Training School, Oswego, N. Y. Approximately 20 per cent of the school day is spent on the playground or in the gymnasium for supervised play activities.*

attention than the average child, the class is usually restricted to eighteen or fewer. Although intellectually retarded, these children have the same social, play and emotional impulses and interests as the normal child. It is therefore desirable so to group the children that their chronological ages will be similar, or at least within a range of three or four years. In older children, twelve to sixteen years of age, in view of the relative emotional instability of these pupils, especially in matters of sex curiosity and sex habit tendencies or delinquencies, it is desirable to have separate classes for boys and girls.

### *Must Be Taught Slowly*

As has been mentioned previously, the content of the school curriculum and the method of teaching for this type of child must to a large extent be different from that planned for the average pupil. The learning process is different in these two groups, on account of the differences in their native or acquired capacity to respond to identical stimuli, and their inherent inability to assimilate or organize their sensory impressions at the same rate or in a similar manner. It is found that these pupils must have the subject matter presented to them in a simple concrete manner. They have little ability to think in the abstract, reflect, preview or reason. They learn through doing, feeling and seeing. What they are to learn must be presented often, in small doses and at short intervals. Thus large doses of drills, repetition and review may be indulged in. Such pupils do not tire so easily of simple monotonous procedures as do normal or superior children.

### *Personality Traits Need Development*

Our chief aim is to cultivate in the pupils desirable habits of study, work, play, diet, rest, sleep and personality and social adjustment. From the educational standpoint, the child should be given as much academic work as he can do reasonably well with comfort, especially basic skills and knowledge to fit him for successful citizenship. For example, we should emphasize the social and practical aspects of life and make sure the child is familiar with such fundamental procedures as signing his name, making change, weights and measures, traffic rules and safety precautions, the elements of civics, and basic habits of personal hygiene. At least one-half of the school time should be given to habit training in such skills as cooking, sewing, basketwork, carpentering, and one, two or three-piece operations in connection with various trades, such as cobbling, painting, bookbinding, weaving and brushmaking. As far as possi-

ble the trade habits developed should have some local usefulness from the standpoint of economic self-support.

In order that these pupils may be able to sell their services, they must be given good habit training in conduct control and social adaptation. Even though they possess excellent training in manual skills, they cannot obtain employment or hold a position unless they manifest such personality traits as punctuality, industriousness, ability to get along with their fellows, respect for law and authority, courteousness, self-control, cheerful or pleasant disposition and other saving graces. These aspects of school and home responsibility are frequently slighted to the later disadvantage of child, home and community.

### *Our Main Obligation*

It must be admitted that certain grist brought to our schools cannot be ground with our present facilities. Therefore, to thrust upon a school system the grosser degrees of mentally defective children is not only an injustice to the other children but also to the child himself, because he is deprived of institutional care and training especially adapted to his needs. Nevertheless, every mentally retarded child should be regarded as a potential citizen until it is demonstrated by medical and psychological examination and by his history of performance that he cannot become such, at least without special institutional training. But it should be a cardinal principle that whenever possible the education of such children shall be carried on under normal circumstances, namely, in the child's home or foster home and in special classes in our public schools. This makes possible the socialization and assimilation of such children in the community in which they will live after their formal education is completed. The socialization of these pupils is our main obligation. Any device or process that will promote this objective deserves whole-hearted support.

### *Opposition of Parents Is a Problem*

Removal of mentally deficient children to a state school or institution for the feebleminded should not be considered until all of the foregoing factors have been critically evaluated and perhaps in certain cases given a trial. The following are the chief reasons for placement of such children in institutions: (1) a degree of mental defect too serious to be benefited by public school facilities; (2) home conditions that militate against the proper supervision, care or guidance of the child or that threaten his safety; (3) emotional instability so great as to handicap the child and lead him habitually to indulge in antisocial or delinquent behavior, and (4) the lack of special educational facilities in the vicinity in which the mentally deficient child lives.

One of the most difficult problems facing the physician in committing such children to state schools is the unwillingness of parents to acknowledge their child's limitations. Naturally enough they cling to the last straw of hope in their efforts to keep such a child within the family fold, even though it is patent to everyone else that he will never be able to live or play with the average child. Time and money are often needlessly and foolishly wasted and the rights of other members of a household are often overridden by misdirected parental love or sentimentality. It is necessary to give such parents a different philosophy of parent-child relationship. Our problem is to get the parents to accept the viewpoint that it is their obligation to assist the child in obtaining training in that which he can do reasonably well, in order that he may be happy in proportion to his capacity, needs and opportunities.

### *Should Be Made Self-Supporting*

Every effort should be made to cause the public to realize that institutions for the feebleminded are essentially schools for the special education of such children. Their success is gauged by their ability to turn out socially efficient and useful citizens. Their organization and their teacher personnel should keep to the front the important fact that a handicapped child is not being educated to be set aside from the rest of the world, but as far as possible to fit him to weave himself into the world, with or without friendly guidance, supervision or protection, as an independent, self-supporting individual. In our present civilization such persons have important niches to fill. It is our opportunity and obligation to assist them in finding and efficiently filling them.

I have attempted to sketch with broad strokes the points of importance confronting us in dealing with mentally retarded school children. We have seen how they were at first given special class facilities because of their antisocial disturbing conduct. With cumulative effect special classes and schools have been created in all states of the Union, although the rural sections are still inadequately served. These facilities have proved their value by their results, not only in educative and economic fields, but also from the standpoint of individual happiness and good citizenship. Our civilization needs the socialized mentally deficient segment of our population distribution. It is the responsibility of the more fortunate members of society to see that every effort is made to capitalize these, our brother citizens.

# Why a Physician Should Head the School Health Program

*A plea for physicians to become interested in and prepare themselves to take over and direct intelligently the comprehensive and constructive health education programs so necessary in our public schools*

By JOHN SUNDWALL, Ph.D., M.D., Professor of Hygiene and Public Health and Director, Division of Hygiene and Public Health, University of Michigan

THE purpose of this discussion is to attempt to outline the various interests and activities that go to make up a productive health education program, to describe a program of study that should prepare the physician to function in the entire field of health education, with a view to encouraging the school physician and other interested physicians to take up the direction of school health education as a career.

I hope that this discussion will prove of interest to school men in general. It may be of some value in helping them to solve an outstanding problem, namely, how to organize and administer a constructive school health education program.

### *What the Program Demands*

The accepted facts and trends relative to a school health education program are:

1. Each school district must provide personnel and machinery for a comprehensive health education program.

2. The health program must be an integral part of the public school system under the jurisdiction of the board of education and the superintendent of the school.

Some health officers will question this statement. In many cities and districts in this country, commendable efforts are now being made by municipal and county health departments to handle this program. Formerly, when public health work was entirely concerned with the prevention and control of communicable diseases, public health departments could function adequately in matters pertaining to school health. The new child health conservation program, with its emphasis on health promotion of the whole child—physical, mental, emotional and social, including health examinations, the prevention and correction of defects, mental hygiene, nutrition and the effective teaching of health—calls for the full-time services of a director who is adequately and specially trained for the work. Moreover, the director of health education must be a genuine school man with a keen understanding of educational philosophy, psychology, school administration and the principles of teaching. The program requires both direct and indirect teaching of health. Therefore, he who directs it must possess a discerning knowledge of the principles of teaching in general and of the methods of health teaching in particular. We must think of this director as one whose job is to see that each little body machine is kept in the best running order so that the pupil will measure up to all the possibilities of satisfactory development.

Schools are entitled to their health services as industries are entitled to theirs. At any rate, it is readily seen that the average municipal, county or district public health department cannot be expected to provide the interests and activities of a comprehensive school health education program. Of course, the school health education director should be a deputy public health officer. In this capacity, he should be of great assistance to the public health department in the prevention and control of communicable diseases in a community.

3. The director should occupy a relatively high position in the administration of the municipal, county or district schools. He should be an assistant superintendent of schools in charge of the health education program. Unless the director is given authority in the school's administration, an effective program cannot be anticipated. His job is to see that a sound program of health education, including both health teaching and health machineries, is maintained in the schools under his jurisdiction. Under his direction and in charge of the health education of each school unit should be a man or

woman who has had training in the principles of school health work. School nurses, physical educators and nutrition workers should make good local school health education supervisors.

4. The success of the health education program depends on the interest taken in it by the entire school personnel. It cannot flourish when the superintendent, the principal or the classroom teacher is indifferent or antagonistic toward it. Therefore the superintendent must take an intelligent interest in it and all the teachers should be actively interested in the fundamentals of health promotion and in the principles of the prevention and control of communicable diseases. Otherwise the essential attitudes, skills and habits relative to health which must be drilled into the child by the teacher will not be forthcoming. These qualities can be developed only when the teacher is intelligently and continuously health conscious regarding her pupils. Worth while health work cannot be done in the school when only isolated efforts are made on the part of a health supervisor. Teachers who are interested in the health of their pupils for many reasons become much more efficient teachers in general.

5. The public schools of the future will have no place for administrators or teachers who are not genuinely interested in the health of the child. Therefore, it behooves teacher training institutions to see to it that prospective teachers are given some instruction in the fundamentals of health promotion and in the prevention and control of communicable diseases.

In my attempts to state the qualifications of the person who is to function adequately as a director of a school health program, I have in mind the person who is to head this program in a city, county or district school system. Of course, as stated before, for each separate school unit a local health supervisor, recruited from the field of physical education, public health nursing or from some other interested field, will function directly.

### *Director's Training Must Be Varied*

Who shall function as the director of a health education program for a school system? Obviously, the answer is that person who is best qualified by nature, training and experience to do the job. The need for the right kind of personality, of course, is evident. This particular qualification, however, may be left to the discernment of the superintendent who employs the director of health education.

The all important thing is the training of the director, which should be: (1) scientific training; (2) training in general education, and (3) special training for the job. Figuratively, we may conceive of this training as a foundation structure composed of three stones. The massive bottom stone represents the scientific training. The middle less massive stone depicts the training in general education and the top stone of this foundation structure indicates the special training for the job.

### *Studying the Human Machine*

The entire program must center in the child. It is evident, therefore, that the director must know the human machine. The running of a locomotive would not be entrusted to a person not familiar with the structure, the workings and the care of such a machine. Likewise, the director of health education, this human engineer, must understand the make-up, the workings and the care of the human machine. He must have adequate training in physics, chemistry, biology, psychology and sociology; he must have completed courses in human anatomy, both gross and microscopic, genetics and embryology; he must study human physiology, with particular reference to neuromuscular physiology, metabolism and growth. To know how to take care of the human machine, he must be trained in those sciences which acquaint one with the abnormal processes, including bacteriology and pathology. Of course, the more knowledge the director possesses about morbid processes in general, the better will he be prepared to administer a school health education program. Moreover, care of the human machines involves knowledge of personal hygiene, community hygiene, health, statistics, epidemiology and public health administration.

I cannot emphasize too strongly the importance of this scientific training. Schools, like other human institutions, tend to react emotionally to things that pertain to the body in order or out of order. Therefore, school administrators are inclined to "feel" rather than to "act" intelligently towards their school health problems. There are as many health cultists and medical dogmas within the walls of the schoolhouse as on the outside. Furthermore, school men have the traditional program of physical education to cope with, which was the first school health agency to make its appearance. Far too many school men sincerely believe that because they maintain athletic programs that are fostered under the guise of health activities, they are meeting their obligations relative to health education. I have in mind several instances in which persons have been called to head important health education programs whose sole qualification, other than a pleasing personality, was that they had shown an adeptness at promoting and administering programs of physical exercise and athletics.

In many respects, the present reaction on the

part of school men towards health education is similar to their former attitude towards the teacher. In the past, a certificate or a diploma from a normal school was *prima facie* evidence that the holder was capable of teaching all subjects making up the curriculum. Little attention was paid to the training of the prospective teacher in the subject matter that was to be taught. This led to the facetious comment that a normal school is an institution that trains its students to teach subjects they know nothing about.

Of course this attitude towards the teaching profession and teacher training institutions is rapidly changing. Nowadays, the first concern of the progressive superintendent is that the teacher should be trained in the subject matter she is to teach. Unfortunately this former attitude towards the teacher and her training prevails in health education. School administrators still continue to engage teachers and supervisors of health education without inquiring as to their training in those sciences that make up health.

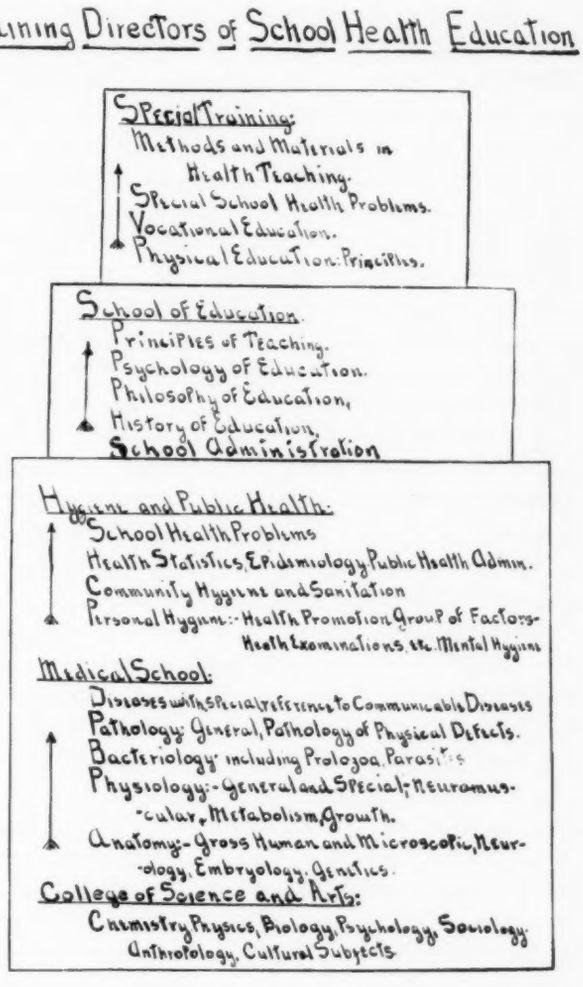
To educators, let me say emphatically: Your first concern in the selection of a person to head the school health education program should be his training in the sciences related to the structure, functions and care of the human body.

Additional training, however, is essential for the physician who anticipates an effective and successful career in school health education. This additional training should take place in a teacher training institution with particular emphasis on history, philosophy and psychology of education, the principles and practices of teaching and school administration.

### *Health Teaching and Health Machineries*

This is desirable for two reasons. First, an effective health education program must be concerned with both health teaching and health machineries. Therefore the health education director should have some training in subjects that will acquaint him with the general principles of effective teaching and he should be inculcated with the underlying spirit of education in general. Second, as I have already specified, the director must be a genuine school man, an assistant superintendent of schools in charge of health education. Unless a physician who is going into health education work has had this training in a teachers' college or a school of education, it will be difficult for him to get the educational point of view and to function adequately in the entire field of child health conservation. The second stone in the foundation of the training structure of directors of health education is this training which is offered in schools of education or teachers' colleges.

The third stone in this foundation structure of training is that concerned with the specialty itself —the methods and materials of health teaching, the "how" of effective health teaching in the various grades with respect to knowledge, attitude, skills and habits. Moreover, training is needed in special school health problems such as health examinations, prevention and correction of physical defects, nutrition, mental hygiene and the general and specific procedures for the prevention and control of communicable diseases.


Training Directors of School Health Education
Special Training:
Methods and Materials in Health Teaching.
Special School Health Problems.
Vocational Education.
Physical Education: Principles.
School of Education.
Principles of Teaching.
Psychology of Education.
Philosophy of Education.
History of Education.
School Administration
Hygiene and Public Health:
School Health Problems
Health Statistics, Epidemiology Public Health Admin.
Community Hygiene and Sanitation
Personal Hygiene:- Health Promotion Group of Factors- Health Examinations, etc. Mental Hygiene
Medical School:
Diseases with Special reference to Communicable Diseases
Pathology: General, Pathology of Physical Defects.
Bacteriology: including Protozoa, Parasites
Physiology:- General and Special;- Neuromuscular, Metabolism, Growth.
Anatomy:- Gross Human and Microscopic, Neurology, Embryology, Genetics.
College of Science and Arts:
Chemistry, Physics, Biology, Psychology, Sociology, Anthropology, Cultural Subjects

In view of the established physical education program and its traditionally close relation to health, the prospective school health education director should have studied the theories, objectives, interests and activities of physical education. There are several objectives in physical education that are not of direct health concern. These will be pointed out later. I am confident that as time goes on, the physical education activities of the school will become closely correlated with the health education program. I do not believe that our schools will maintain two independent agencies primarily concerned with the physical welfare of pupils. In view of the fact that vocational educa-

tion utilizes the so-called "big muscle activities," it is recommended that this special training include a course in vocational education.

This special training must be provided by the school of education, the medical school, the dental school and other departments of the university.

### *Graduate Study Is Necessary*

Just how much time the young physician who has completed an internship in a hospital and who is going into school health education work should devote to studies along the lines of general education and to the specialty itself is still to be determined. Training curricula for physicians going into school health education work should be provided in several of the larger universities that maintain schools of education with their elementary and high schools, medical schools, dental schools and schools of hygiene and public health, all in close proximity to each other on the campus.

For the present, at least, a one-year graduate program of study in school health education, leading to the degree of master of science in health education, should be offered by some of these universities. Perhaps, after some experimentation on the part of universities in offering these curricula, it will be found that a longer time is necessary for this training.

Physicians who are now doing school work and who desire to follow health education work in its most comprehensive sense should avail themselves of the opportunities offered at summer sessions of universities to pursue studies in education and in the specialties named. It will pay them to do so. Moreover, it will make them of infinitely greater value to the public schools. The accompanying diagram illustrates the three stones in the foundation structure of training for the directorship of a comprehensive and constructive program of school health education.

One of the peculiarities of our human make-up is that when a new need for our schools or for society is realized we establish a new agency to meet it. Of course the proper thing would be to reconstruct some existing agency that might well take care of the new project. As a result of this tendency society and social institutions have become burdened with a multiplicity of welfare agencies which are continuously stepping on each other's toes and which duplicate each other's work to a large extent. Like society schools are burdened as a result of this tendency.

At any rate, our public schools have inherited at least four agencies that claim to be primarily interested in the health of school children. First, formal physical education, as promoted by Jahn and Spiess in Germany and the Lings in Sweden, was introduced. We must realize that these systems of formal group exercises had their origin at a time when it was assumed that daily exercise was about the only thing that was necessary in order to build up and maintain a sound, vigorous and harmoniously developed body. This was before the development of the sciences that make up modern medicine and hygiene, for the most part.

The second movement was the breaking away from formal physical exercise and the establishment of what is now called informal physical education, play, games, sports and athletics. Of course, this informal physical exercise, especially athletics, has a potent instinctive and emotional pull on all of us. Moreover, we can indulge and gratify our innate urges for physical excellence, competition and mastery just as effectively through representation as we can by actual participation in play, games, sports and athletics. This accounts for our "stadium" participation in athletics and for its great hold on the American public. Moreover, we like to rationalize our participation in sports on the basis that it is primarily a health interest. At any rate, the proponents of both formal physical education—gymnastics, calisthenics and mass drills—and informal physical education—play, games, sports and athletics—solicit support for these activities on the sincere pretensions that they, the promoters, are primarily interested in the health of the pupils.

### *The Rise of School Health Service*

A third and later health movement had its beginnings in the public schools when it was gradually realized that school children were the victims of many defects and disorders with which physical education was unable to cope. Physical educators, coaches, play directors and other physical education workers were not trained to deal with these defects of childhood. Moreover, owing to this potent innate urge for physical expression, naturally the teachers and supervisors of both informal and formal physical education became interested in physical exercise activities as ends in themselves. At any rate, a third school health agency was established. The term "school health service" is utilized to designate this agency which is manned by physicians, dentists, nurses, nutrition workers, mental hygienists and others.

The fourth school health movement appeared on the horizon some fifteen or twenty years ago. It began when the center of interest in public health work shifted from the environment and the environmental control of communicable diseases to the human being. With the human being as the center of interest, it was suddenly realized that progress in public health would be in direct

ratio to the education of the public in matters pertaining to health promotion. In other words, in this day and age, our first interest in public health must be public health education. Moreover, we now appreciate the fact that heretofore we have been establishing the machineries of public health work and regulations pertaining to it far in advance of the capacity of the masses to understand and utilize them. In the public schools, we have had to resort to several compulsory requirements in order to get the pupils to utilize the established health practices and machineries.

### *Educating the Public*

We now realize that the most urgent need in public health as well as in school health is to teach people to appreciate, to want and to practice health and to know how to utilize intelligently the various machineries of public and school health services. The fourth school health movement, therefore, is primarily concerned with effective health teaching.

Thus, these four movements and their resulting agencies, each more or less concerned with the health of school children, have come down to us from the past. Each of them was initiated with a view to meeting an apparent need. The gymnast became the chief exponent of formal physical education. Coaches and play directors are the chief exponents of informal physical education. The school health service must be staffed by physicians, dentists and nurses. Health teaching is an interest that must be carried on by the entire teaching staff of the school under the supervision of one who is adequately trained in those sciences making up health work and in the principles and practices of sound teaching. Thus, it is seen that the training and interests of the functionaries in these four school health agencies are dissimilar.

Formal and informal physical education have become linked, more or less satisfactorily, in the public schools. At any rate, each of these agencies solicits support from the school budget on the plea that it is fundamentally interested in the health of the school children. Each has something to contribute. Moreover, physical education has several important interests other than health to contribute to the welfare and education of the child.

Owing to this diversity of training and interests on the part of those who now function in the four agencies that make up the physical welfare group of activities in the public school, it is difficult indeed for the members in one group, let us say physicians, to understand the methods of another group, physical educators. Furthermore, what is the poor superintendent going to do after he has had conferences with representatives of each of these agencies? Certainly, he will be bewildered after each has laid down his claims on the school health education program. At any rate, it will be appreciated that when each of these activities, which claim to have something to contribute and do contribute to the school health education program, operates more or less independently, a constructive program of health education cannot be forthcoming. It will be a piecemeal affair. Only some of the factors of health promotion, whether important or not, will be emphasized. Others will be woefully neglected. Much duplication and friction will be the inevitable result. What is several men's job is nobody's job.

No one will gainsay the statement that a constructive school health education program can be forthcoming only when all the interests and activities in our public schools dealing directly with the health of pupils are correlated and organized into one administrative unit and directed by one who is adequately trained to do the job. The veracity of this statement is so evident that it may be accepted as an axiom.

How can we go about setting up a single unit of health interests and activities for the public schools? Naturally the training of directors along the lines already considered is of first importance. The second concern is to blend together the four interests concerned with the physical welfare of school children in such a way that the direct health interests are merged into one effective whole and that the other important activities, particularly of physical education, are conserved. Assuredly, these nondirect health objectives of physical education can be exercised effectively within an ideal health education unit provided the director has been trained in the objectives, principles and practices of physical education.

### *A Correlation of School Health Interests*

The accompanying chart, Health Education in the Public Schools, shows a plan for correlating and organizing the various school health interests into one administrative unit. It also calls attention to the many things that must be duly considered in this program. Of course, in local and small district schools, the many professions named under the caption of Personnel in each of the columns will not be employed. In general, in the school units and in the small school districts, perhaps one person will have to function alone to some extent in most of the school health work. Let us accept this plan, then, for the idea it attempts to convey of a constructive school health education program rather than, primarily, a plan of organization which of course cannot be anticipated for the smaller school districts. The idea applies equally to the little red schoolhouse in a remote district

and to the large metropolitan school district.

At the head of the program of Health Education in the Public Schools for a municipality, a county or a consolidated school district, a director should be placed who has an adequate knowledge of structure, functions and care of the human body as a whole, school administration in general, the philosophy, sociology and psychology of education and the principles of teaching, as well as a knowledge of those subjects and sciences that include the special activities involved in health education. The director should in every sense of the word be a genuine school man, an assistant or deputy superintendent of schools in charge of health education.

Health education involves two main lines of interest and activities. One is Health Instruction, pedagogically and psychologically sound. The other is Physical Welfare Activities or machineries whereby the essential "doing" aspects of health education are put into effect. In the largest measure possible, the physical welfare activities should be regarded as the laboratory phases of health instruction. Hence these two main lines of health education should be tied up into one administrative unit.

### *The Classroom Teacher's Contribution*

Effective health teaching must include regularly scheduled special instruction in the fundamentals of health promotion and disease prevention for the various grade levels. This instruction must be pedagogically and psychologically sound with particular reference to knowledge of health matters, to the right attitude towards health, to the activities or skills necessary in maintaining health and in the utilization of health machineries and to the inculcation and practice of lasting health habits.

Of utmost importance is the contribution the classroom teacher should make to health education. She should be intelligently health conscious of her pupils throughout the day. Frequent inspections and drills are necessary. The essential health attitudes, skills and habits in pupils cannot be anticipated without this constant interest on the part of the teacher. She should be interested in normal growth and development, in posture and in the prevention, detection and correction of defects. In a large measure, this is what is meant when it is said that the whole child goes to school and the teacher must be a whole child pedagogue. Let me emphasize again that the teacher who becomes intelligently interested in the health of her pupils will add much to the joy of her own living and to the effectiveness of her teaching. Superintendents of schools should take note of this statement.

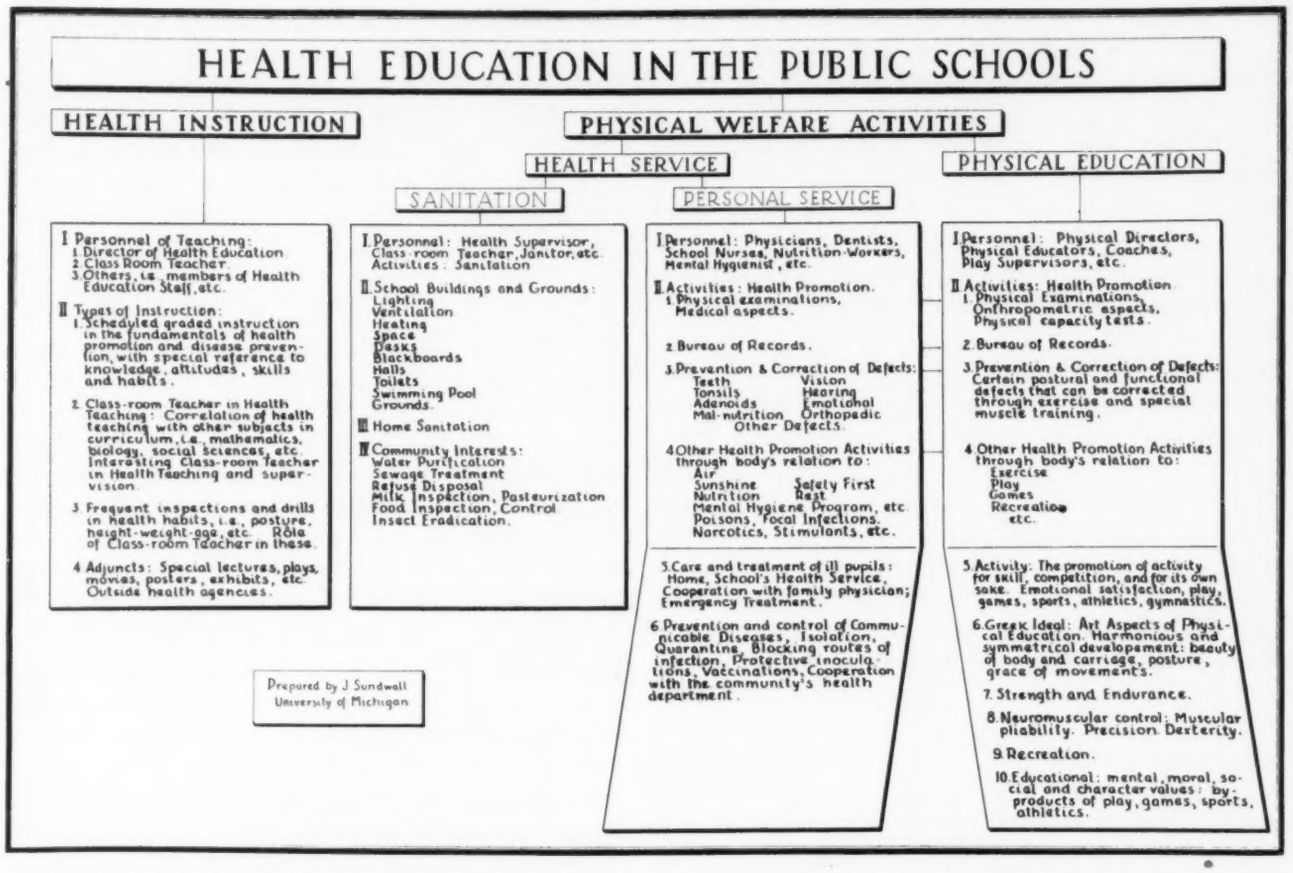
Directors of health education must realize the supreme importance of sound health teaching and see to it that this is effectively going on in the schools under their health jurisdiction. Moreover, they must have training in education and in methods and materials in health teaching in order to see to it that sound special and correlated instruction in health is going on, that the teacher is meeting her obligations in this matter and that the health teaching is closely related to the physical welfare activities. Assuredly, this is a big job for the director.

The Physical Welfare Activities as we now find them in the public schools fall into two main groups, health service and physical education. The former is manned by doctors, dentists and nurses, including in some quarters nutrition workers and psychologists—mental hygienists. The latter is staffed by those who are the products of training curricula in physical education and by play directors or coaches who are proficient in the direction of athletics. The interest and activities of the health service may be arranged into two general groups, sanitation and personal service. The personnel and activities of sanitation are listed in the chart and need no further comment. The interrelation of the personal service of the health service and physical education is difficult to understand on the part of school administrators, school physicians and others concerned.

Let me review the salient points regarding physical education. It was the first health agency to appear in the public schools. It had its beginnings in those far off days when little was known regarding the sciences that make up modern medicine, hygiene and public health and when daily physical exercise was thought to be all that was necessary to build up and maintain vigorous and harmoniously developed bodies. In the course of its history, its leaders have added objectives other than health to physical education. In recent years they have stressed certain educational values, mental, moral and social, which are to be gained through participation in play, games, sports and athletics. So broad and all inclusive are the definitions of the aims and functions of physical education that one can no longer differentiate between them and the definitions of the aims of public school education in general.

### *The Pros and Cons of Physical Education*

In theory physical education includes some praiseworthy objectives. In practice it is largely concerned with the promotion of play, games, sports and athletics for their own sake and as ends in themselves. The reason for this has already been considered—our innate urges for physical performance, emulation, competition, rivalry, and


HEALTH EDUCATION IN THE PUBLIC SCHOOLS
HEALTH INSTRUCTION
PHYSICAL WELFARE ACTIVITIES
HEALTH SERVICE
SANITATION
PERSONAL SERVICE
PHYSICAL EDUCATION
I Personnel of Teaching:
1. Director of Health Education
2. Class Room Teacher
3. Others, i.e. members of Health Education Staff, etc.
II Types of Instruction:
1. Scheduled graded instruction in the fundamentals of health promotion and disease prevention, with special reference to knowledge, attitudes, skills and habits.
2. Class-room Teacher in Health Teaching: Correlation of health teaching with other subjects in curriculum, i.e., mathematics, biology, social sciences, etc. Integrating Class-room Teacher in Health Teaching and supervision.
3. Frequent inspections and drills in health habits, i.e., posture, height-weight-age, etc. Role of Class-room Teacher in these.
4. Adjuncts: Special lectures, plays, movies, posters, exhibits, etc. Outside health agencies.
I. Personnel: Health Supervisor, Class-room Teacher, Janitor, etc.
Activities: Sanitation
II. School Buildings and Grounds:
Lighting
Ventilation
Heating
Space
Desks
Blackboards
Halls
Toilets
Swimming Pool
Grounds.
III Home Sanitation
IV Community Interests:
Water Purification
Sewage Treatment
Refuse Disposal
Milk Inspection, Pasteurization
Food Inspection, Control
Insect Eradication.
I Personnel: Physicians, Dentists, School Nurses, Nutrition-Workers, Mental Hygienist, etc.
II Activities: Health Promotion.
1. Physical examinations, Medical aspects.
2. Bureau of Records.
3. Prevention & Correction of Defects:
Teeth
Vision
Tonsils
Hearing
Adenoids
Emotional
Mal-nutrition
Orthopedic
Other Defects.
4. Other Health Promotion Activities through body's relation to:
Air
Sunshine
Safety First
Nutrition
Rest
Mental Hygiene Program, etc.
Poisons, Focal Infections.
Narcotics, Stimulants, etc.
5. Care and treatment of ill pupils: Home, School's Health Service. Cooperation with family physician; Emergency Treatment.
6. Prevention and control of Communicable Diseases, Isolation, Quarantine, Blocking routes of infection, Protective inoculations, Vaccinations, Cooperation with the community's health department.
I Personnel: Physical Directors, Physical Educators, Coaches, Play Supervisors, etc.
II Activities: Health Promotion
1. Physical Examinations, Onthropometric aspects, Physical capacity tests.
2. Bureau of Records.
3. Prevention & Correction of Defects: Certain postural and functional defects that can be corrected through exercise and special muscle training.
4. Other Health Promotion Activities through body's relation to:
Exercise
Play
Games
Recreation
etc.
5. Activity: The promotion of activity for skill, competition, and for its own sake. Emotional satisfaction, play, games, sports, athletics, gymnastics.
6. Greek Ideal: Art Aspects of Physical Education. Harmonious and symmetrical developement: beauty of body and carriage, posture, grace of movements.
7. Strength and Endurance.
8. Neuromuscular control: Muscular pliability. Precision. Dexterity.
9. Recreation.
10. Educational: mental, moral, social and character values: by-products of play, games, sports, athletics.
Prepared by J. Sundwall
University of Michigan

mastery with their accompanying potent emotional reactions. It attracts to it many teachers and supervisors whose interests are largely confined to the promotion of play and athletics for their own sake and as ends in themselves. A genuine school health education program will always be interested in a certain amount of daily exercise as one of several factors in building up and maintaining a sound, vigorous and harmoniously developed body. There is therefore a marked difference in the attitude toward a physical program of the supervisor of a play, games, sports and athletic program, on the one hand, and of the physician or trained health worker, on the other. What the latter objects to, and rightfully so, is that a more or less exclusive sports activity should mask itself under the caption of health education and be supervised by inadequately trained men.

Of course the genuine health worker has no objections to an athletic program for its own sake and as an end in itself providing it is physiologically sound and not harmful to the participants. If school men believe that a program of this type should be maintained in the schools in order to satisfy our innate urges along the lines of physical competition and mastery, well and good. The proponents of play, games, sports and athletic programs in the public schools have always maintained that such a program has an important educational value, mental, moral, social, that is peculiar to this program and that cannot be gained in other school activities. If school men hold that this educational value is of sufficient importance to justify the program as an independent activity in the school then no objections on the part of genuine health educators should be voiced against it.

The problem is simply this, Is health the primary objective in physical education? If so, it should be combined with the health education program under the direction of one who is adequately trained to take care of the various health needs of the child. Of course the other nonhealth values or objectives of physical education can be recognized and filled within this combination.

On the other hand, if the outstanding functions of physical education are to promote a gymnastics, play, game, sports or athletic program for its own sake with a view to stimulating and teaching children to play and to become proficient in play, having in mind the recreational and the so-called educational values, then physical education may well be organized into a separate agency in the schools. In this event, its relationship to a genuine health education program would be about the same as that of vocational training and other activities that utilize the big muscles.

On the whole, educators and the public regard physical education and health as synonymous. I do not believe that the schools will support physical education and health education as two independent

agencies. However, it is up to school men to decide. The time is here when they should make some clear-cut pronouncements relative to this matter.

In making these comments, I am not unmindful of the many supervisors of physical education who are making intelligent efforts to acquaint themselves with the modern child health conservation movement through diligent study of the subjects and sciences that make up public and school health, including the teaching of health. Moreover, in many quarters physical education is establishing a genuine leadership in school health education. There is no reason in the world why physical education should not take over health education, provided it is willing to pay the price of that training which is essential to the carrying on of a constructive health education program.

In the column Personal Service of the chart, the activities of this service are listed, as are similar activities under Physical Education. These two columns are parallel to each other in part and then diverge. Under Activities, the first four items in each column are concerned with the machineries of health promotion and therefore should be closely correlated in order to secure a well balanced health program. Of course the allotment of some of these items will be criticized. However, the important thing is to see that all the factors that make up a balanced program of health education are adequately cared for whether this is done by the personal service of the health service or by physical education.

### *Some Objectives of Physical Education*

The divergent parts of these columns include the activities that belong more or less to each, Personal Service and Physical Education. Item 5, Care and Treatment of Ill Pupils, and Item 6, Prevention and Control of Communicable Diseases, under Personal Service, are medical problems. In the divergent portion of the Physical Education column, we find Item 5, Activity; Item 6, Greek Ideal: Art Aspects of Physical Education; Item 7, Strength and Endurance; Item 8, Neuromuscular Control; Item 9, Recreation; Item 10, Educational. These are important objectives of physical education which on the whole are not directly concerned with health and therefore are not of much concern to the average school physician. They are much better cared for by physical education.

The fact that the interests and activities of physical education and the health service diverge at a certain point does not justify independent organizations for each. The important thing is for the school physician who anticipates school health education in its totality as a career to understand, appreciate and provide for the objectives in physical education that are not directly concerned with health but which add so much to the welfare of the child. I have therefore included a study of physical education, its history, philosophy, objectives and functions, as a part of the special training of the school physician going into health education work.

### *The School Physician's Rôle*

In general, the average school physician plays only a small part in the constructive program of health education in the public schools that I have outlined. Judging from the accompanying chart, about all he does is to function in the Personal Division of the Health Service. Under Activities, in this column, the school physician takes care of Item 1, Physical Examinations; Item 2, Bureau of Records, and Item 3, Prevention and Correction of Defects in part. Generally he is concerned with Item 3 only in so far as as the detection and diagnosis of defects are concerned. He leaves the difficult task of corrections of defects to the follow-up work of the school nurse and to the family physician. He does not worry much if this work is not done. The school physician may or may not do anything in Item 4, Other Health Promotion Activities. He may render some service, emergency, in Item 5, Care and Treatment of Ill Pupils, and likewise in Item 6, Prevention and Control of Communicable Diseases. As far as the many other important activities itemized in the chart are concerned, the average school physician has little if anything to contribute. At any rate, the chart shows that his rôle in an ideal school health program is limited wholly or in part to several items out of many important ones that make up a worth while program.

My plea is that the school physician should prepare himself to direct effectively a comprehensive health education program in the public schools.

He has a great advantage over others who aspire to become directors of school health education in that his basic scientific training for the job is generally superior. With an additional year or more of study along the lines indicated, he should become an ideal director of such a program for the schools of a municipality, a county or a district. He will be happy and contented in this work. It offers him unlimited opportunities for study, research and investigation. School men need and want his services. Assuredly physicians trained to direct health education programs in our public schools will contribute immeasurably to the welfare of the children.[1]

[1]Read at the fourth annual meeting of the American Association of School Physicians, Montreal, Que.

# How a Small High School Conserves Its Teachers' Energy

*The two year alternation plan described here gives teachers fewer subjects and more classes in the same subject, a method that gives them incentive to attain complete mastery of their subjects*

By LYNN E. CASTLE, Riverside, Ill.

THE article in the August, 1930, issue of The NATION'S SCHOOLS by Prof. Calvin O. Davis points out the difficulty that confronts small high schools when teachers are called upon to spread their energies over a wide range of subjects in which they have little preparation.

An administrative device which in a measure overcomes this difficulty is the offering of certain subjects in alternate years to double sized groups, making it possible for teachers in a small school to concentrate upon fewer subjects.

The accompanying table of subjects illustrates a two-year alternation plan. Asterisks indicate classes in which pupils of two or more years are grouped together. When the resulting group is large enough it can be redivided, if desired, on an ability or other special grouping basis.

TIME SCHEDULE FOR 1929-30

| Teacher / Per. | Principal with Math. & Science Major Academic) | Sup't. with History Minor | Academic Teacher with Eng. Major Latin Minor | Academic Teacher with Soc. Sci. Major Phys. Ed. | Vocational Agri. Teacher | Teacher of Commercial subjects and Instrum. Music | Academic Teacher with Science Major Eng. Minor | Vocational Teacher Home Ec. Major Science Minor |
|---|---|---|---|---|---|---|---|---|
| 1 | Algebra 9-10 A | | English 11-B | Economics | Farm Shop | Typing | Assembly | Home Economics 9 B |
| 2 | Adv. Alg. Adv. Arith 11-12 | | English | World History 9-10 A | | Introd. to Business (1st Sem) | Assembly | |
| 3 | Algebra 9-10 C | | English 9 A | Assembly | | Shorthand | | Advanced Home Economics |
| 4 | | | Assembly | World History 9-10 C | | Typing | English | |
| 5 | Assembly | | | World History 9-10 B | Animal Husbandry | Band & Orchestra (Alt. Days) | Biology Physiology | |
| 6 | Assembly | | Latin II 11-12 | | | Shorthand | English 9-10 B | |
| 7 | Algebra 9-10 B | U. S. History | English 12 | Girls' Physical Training | | Stenography & Secretarial Practice 12 (2nd Sem.) | Assembly | Home Economics 9 A |
| 8 | | | Assembly | Girls' Physical Training | | | 8th Liter. | |

TIME SCHEDULE FOR 1930-31

| Teacher / Per. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | Assembly | | English 11 B | Economics | Farm Shop 9 | Typing | Science 9-10 A | Home Economics 9 B |
| 2 | Geom. 10-11 B | | English 11 A | Citizenship & Occupations | | Introd. to Business 11-12 A | Assembly | |
| 3 | Assembly | | English 9 A | | Farm Management | Introd. To Business 11-12 B Bkpg. (2nd) | Science 9-10 C | Advanced Home Economics |
| 4 | Geom. 10-11 A | | Assembly | Citizenship & Occupations | | Typing | English 10 A | |
| 5 | Assembly | | | Citizenship & Occupations | Farm Crops | Band & Orchestra | | Psychology 11-12 |
| 6 | Physics 11-12 | | Latin I 10-11 | Assembly | | Typing | English 9-10B | |
| 7 | Assembly | U. S. History 11 | English 12 | Girls' Physical Training | | | Science 9-10 B | Home Economics 9 A |
| 8 | | | Assembly | Girls' Physical Training | | | 8th Liter. | |

In most of the regular subjects the plan brings together a group of pupils large enough to allow redivision into two and sometimes three sections on the basis of reading ability and intelligence, or on any other basis of homogeneous grouping.

The time schedules given here, worked out and used in a small high school in Iowa, show how it is possible to offer a full schedule of academic subjects by this plan with only four academic teachers. The three vocational teachers are on full time in their own departments, except that one of them teaches a class in a related science. Physical education for boys is taught by the junior high school principal, not listed. The enrollment is 155 pupils in grades nine to twelve. The periods are forty-five minutes.

Some features of the plan are open to objection.

1. The pupil who enters in the middle of his course from another school may find his schedule of subjects disorganized and may have difficulty in getting all the required subjects. It is occasionally necessary to waive the requirement of one of the subjects for graduation in order to avoid doing an injustice to such pupils.

2. The practice of offering subjects in alternate years to combined groups cannot be defended if we assume that we know the one best age, or rather the one best educational level at which to teach each subject, an assumption that I do not accept. The schedule of subjects need not violate sequences of subject matter which are really necessary.

3. The making of the daily schedule, which appears to be complicated by the alternation

A SCHEDULE OF SUBJECTS ILLUSTRATING A TWO-YEAR ALTERNATION PLAN

| *1929-1930* | *1930-1931* |
|---|---|
| 9th Grade | 9th Grade |
| English* | English* |
| Algebra* | General Science* |
| World History* | Citizenship* |
| Manual Training or | Manual Training or |
| Home Economics | Home Economics |
| 10th Grade | 10th Grade |
| English* | English* |
| Algebra* | General Science* |
| World History* | Citizenship* |
| Latin II* | Plane Geometry* |
| Animal Husbandry* | Latin I* |
| Typewriting | Farm Crops* |
| | Typewriting |
| 11th Grade | 11th Grade |
| English | English |
| U. S. History | U. S. History |
| Biology (1st sem.)* | Plane Geometry* |
| Physiology (2nd sem.)* | Physics* |
| Adv. Algebra (1st sem.)* | Latin I* |
| Adv. Arithmetic (2nd sem.)* | Farm Crops* |
| Animal Husbandry* | Adv. Home Economics* |
| Shorthand* | Typewriting |
| Latin II* | General Business (1st)* |
| Advanced Home Economics* | Bookkeeping (2nd)* |
| | Psychology (1st)* |
| | Music Appreciation (2nd)* |
| | Farm Management* |
| 12th Grade | 12th Grade |
| English | English |
| Economics (1st sem.) | Economics (1st sem.) |
| Sociology (2nd sem.) | Sociology (2nd sem.) |
| Biology (1st sem.)* | Physics* |
| Physiology (2nd sem.)* | Plane Geometry* |
| Adv. Algebra (1st sem.)* | Adv. Home Economics* |
| Adv. Arithmetic (2nd sem.)* | Farm Management* |
| Animal Husbandry* | General Business (1st sem.)* |
| Shorthand* | Secretarial Practice (2nd sem.) |
| Latin II* | Psychology (1st sem.)* |
| Adv. Home Economics* | Music Appreciation (2nd)* |

*Classes in which pupils of two or more years are grouped together.

scheme, is really simplified because a larger number of divisions of the same subject and fewer subjects taught, make it easier to avoid conflicts for the individual pupil.

4. No brief is held for the practice of homogeneous grouping as a panacea for bad teaching, because too little is known about how to adjust teaching to differences in ability, but groups that are approximately equal in reading ability and intelligence seem to offer less difficulty to the teacher of limited experience, both in management and in planning the assignment. This factor, though negative, is often important in preventing teacher failures in the small high school.

A summary of the advantages of the plan might include the following:

1. The teacher's time is concentrated upon a few subjects which are in line with her major preparation.

2. Teaching fewer subjects and more divisions of the same subject encourages thorough detailed preparation which leads to mastery on the part of the teacher.

3. Reduction in the number of subjects offered in a given year allows a better adaptation of laboratory and classroom facilities.

4. Classroom management and assignment of lessons may be simplified and individual differences provided for by homogeneous grouping, not otherwise possible except in larger schools.

5. Small classes with their high pupil cost may be eliminated.

# How Much Must a Student Know to Gain Entrance to College?

*A comparison of two groups of colleges and universities from the standpoint of admission requirements*

By EARL W. BAKER, Superintendent, Consolidated School System, Pritchett, Colo.

THE data presented here are based upon an analysis of college admission requirements as found in the college catalogues of 198 colleges and universities for the year 1929-30.

One hundred colleges and universities in the North Central Association of Secondary Schools and Colleges are included in the study. The remaining ninety-eight colleges and universities are in the following states: New York, Delaware, Maryland, Pennsylvania, New Jersey, Connecticut, Massachusetts and New Hampshire. This latter group of schools will be designated Eastern colleges.

The liberal arts college admission requirements are the only ones considered in this article. Obviously, there are various lists of admission requirements throughout the separate colleges in any university and in order to tabulate the data of this study uniformly it is necessary to consider only one type of college. The liberal arts colleges are well attended throughout the country and were selected for the study.

For purposes of comparison the colleges and universities in the North Central Association of Secondary Schools and Colleges are arranged in one group and the Eastern colleges are placed in a second group.

Table I shows that out of the 100 North Central colleges 92 per cent require 15 units for unconditional admission to college freshman standing. Out of the 98 Eastern colleges 90.8 per cent require 15 units for admission.

TABLE I—TOTAL UNITS REQUIRED FOR ADMISSION

| | *North Central Colleges Per Cent* | *Eastern Colleges Per Cent* |
|---|---|---|
| 15 units | 92 | 90.8 |
| 15½ units | 0 | 2 |
| 16 units | 8 | 6.1 |
| 19 units | 0 | 1 |

Table II shows that 99 per cent of the North Central colleges specifically state that entering pupils must have preparatory work in English and 58 per cent of them require some preparation in a foreign language. It will be noted that the foreign languages are emphasized in the Eastern colleges to a larger extent than in the North Central colleges, 93.8 per cent of the former requiring preparation in this department.

TABLE II—REQUIREMENTS IN THE VARIOUS DEPARTMENTS OF SUBJECT MATTER

| | *North Central Per Cent* | *Eastern Per Cent* |
|---|---|---|
| English | 99 | 98.9 |
| Foreign Language | 58 | 93.8 |
| Science | 68 | 35.7 |
| Algebra | 69 | 80.6 |
| Geometry | 68 | 81.6 |
| Mathematics—no specified kind | 21 | 18.3 |
| Trigonometry | 0 | 2 |
| History | 49 | 66.3 |
| U. S. History and Civics | 8 | 2 |
| History and Civics | 5 | 1 |
| Civics | 0 | 1 |
| History, Civics, Economics group | 5 | 0 |
| History, Civics, Econ., Sociology | 1 | 0 |
| History and Social Science | 3 | 2 |
| Social Science | 9 | 4 |
| Bible | 0 | 1 |
| Allowing specified electives | 81 | 85.7 |
| Allowing free electives | 55 | 19.3 |

The North Central colleges emphasize science more than the Eastern colleges do, 68 per cent of the former requiring preparation in it as against only 35.7 per cent of the latter schools.

It will also be noted that practi-

TABLE III—REQUIREMENTS IN ENGLISH

| | *North Central Per Cent* | *Eastern Per Cent* |
|---|---|---|
| 2 units | 1 | 0 |
| 3 units | 98 | 91.8 |
| 4 units | 0 | 7.1 |

cally three times as many North Central colleges allow free electives as do the Eastern colleges. (A free elective is any subject offered by an accredited high school; a restricted elective is a subject chosen from a specified group.)

It has been shown that English is practically a universal requirement. A mastery of our language is the key to learning in all grades.

Table III shows that 98 per cent of the North Central colleges require three units of English and that 91.8 per cent of the Eastern colleges set up the same requirement. A comparison shows that the tendency among Eastern colleges is toward a slightly higher English requirement than that which prevails among North Central schools. However, the percentage of Eastern colleges requiring four units of preparation is hardly great enough to be regarded as significant.

The foreign language requirements among Eastern colleges are, on the whole, much higher than among the North Central colleges. A foreign language is very nearly a universal requirement in the Eastern section while in the North Central area only 58 per cent of the colleges set up this requirement.

Table IV shows that 43 per cent of the North Central colleges require two units in the same language and 9 per cent of them require two units but do not state that they must be in the same language. There is a wide variation among the colleges regarding the amount and type of foreign language training that should be given in the secondary schools.

TABLE IV—REQUIREMENTS IN FOREIGN LANGUAGES

| | *North Central Per Cent* | *Eastern Per Cent* |
|---|---|---|
| 2 units in one language | 43 | 10.2 |
| 2 units of language | 9 | 7.1 |
| 3 units of language | 1 | 0 |
| 2 units in one language plus 1 unit of any language | 0 | 2 |
| 3 units in one language | 0 | 18.3 |
| 2 units in one language plus 2 units in one other language | 2 | 10.2 |
| 2 units in one language plus 2 units of any language | 1 | 2 |
| 3 units in one language plus 1 unit in any language | 0 | 1 |
| 4 units of language | 1 | 3 |
| 4 units in one language | 1 | 4 |
| 3 units in one language plus 2 units in one other language | 0 | 15.3 |
| 3 units in one language plus 2 units of any language | 0 | 4 |
| 3 units in one language plus 3 units in one other language | 0 | 2 |
| 3 units in one language plus 3 units in any language | 0 | 1 |
| 4 units in one language plus 2 units in one other language | 0 | 6.1 |
| 4 units in one language plus 2 units in any language | 0 | 1 |
| 4 units in one language plus 3 units in one other language | 0 | 4 |
| 4 units in one language plus 3 units in any language | 0 | 1 |
| 4 units in the same language plus 4 units in one other language plus 1½ units in one other language | 0 | 1 |

TABLE V—REQUIREMENTS IN SCIENCE

| | *North Central Per Cent* | *Eastern Per Cent* |
|---|---|---|
| 1 unit | 65 | 33.6 |
| 2 units | 3 | 2 |

With regard to mathematics, a study I conducted in 1927 shows some interesting things about this problem. The thesis,[1] "A Comparison of the Content in Algebra and General Mathematics," was based upon an analysis of commonly used textbooks in ninth grade algebra and ninth grade general mathematics. Among other things, it was shown that the difference between the two types of texts is not particularly one of quantity or qual-

TABLE VI—REQUIREMENTS IN VARIOUS BRANCHES OF MATHEMATICS

| | *North Central Per Cent* | *Eastern Per Cent* |
|---|---|---|
| 1 unit of Algebra | 65 | 28.5 |
| 1½ units of Algebra | 4 | 27.5 |
| 2 units of Algebra | 0 | 24.4 |
| 1 unit of Geometry | 68 | 81.6 |
| ½ unit of Trigonometry | 0 | 2 |
| 1 unit of Mathematics—kind not specified | 5 | 1 |
| 1½ units of Mathematics—kind not specified | 0 | 1 |
| 2 units Mathematics—kind not specified | 16 | 11.2 |
| 2½ units Mathematics—kind not specified | 0 | 2 |
| 3 units Mathematics—kind not specified | 0 | 3 |

[1]This thesis is available in the education library of the University of Iowa.

ity of subject matter but rather one of the distribution of subject matter.

Sixty-five per cent of all North Central colleges studied require one unit of algebra as against 28.5 per cent of the Eastern colleges. None of the North Central schools require two units of algebra, whereas 24.4 per cent of the Eastern colleges do. Of the North Central colleges, 21 per cent permit general mathematics preparation and 18.2 per cent of the Eastern schools make this provision.

Of the 100 North Central colleges 7 per cent require a total of one unit of mathematics and 78 per cent of them require two units in this field. Of the Eastern schools 37.7 per cent require two units of mathematics preparation.

TABLE VII—TOTAL MATHEMATICS REQUIRED

| | *North Central Per Cent* | *Eastern Per Cent* |
|---|---|---|
| 1 unit | 7 | 1 |
| 1½ units | 0 | 1 |
| 2 units | 78 | 37.7 |
| 2½ units | 5 | 31.6 |
| 3 units | 0 | 27.5 |

The requirements that have been set up in the field of history and social science have been listed by the various colleges under several headings.

Table VIII shows that the most common requirement in this department is one unit of history.

One Eastern college requires one unit of high school preparation in Bible study for unconditional admission to college freshman standing. No other college included in this study sets up a requirement in this subject.

TABLE VIII—REQUIREMENTS IN HISTORY AND SOCIAL SCIENCE

| | *North Central Per Cent* | *Eastern Per Cent* |
|---|---|---|
| 1 unit of History | 47 | 61.2 |
| 1½ units of History | 0 | 1 |
| 2 units of History | 2 | 4 |
| 1 unit U. S. History and Civics | 8 | 2 |
| 1 unit of History and Civics | 4 | 1 |
| 2 units of History and Civics | 1 | 0 |
| ½ unit of Civics | 0 | 1 |
| 1 unit History, Civics, Economics group | 1 | 0 |
| 1½ units History, Civics, Economics group | 4 | 0 |
| 1½ units in History, Civics, Economics, Sociology group | 1 | 0 |
| 1 unit of History and Social Science | 2 | 1 |
| 2 units of History and Social Science | 1 | 1 |
| 1 unit of Social Science | 4 | 3 |
| 2 units of Social Science | 4 | 1 |
| 3 units of Social Science | 1 | 0 |

TABLE IX—RANGE OF CREDIT ALLOWED FOR ELECTIVES

| | *North Central* | *Eastern* |
|---|---|---|
| Free electives | 55 per cent | 19.3 per cent |
| Range | 1—12 | 1—8 |
| Median | 4 | 3 |
| Restricted electives | 81 per cent | 85.7 per cent |
| Range | 1—10 | 1—9 |
| Median | 6 | 4 |

Only 55 per cent of the North Central colleges allow credit for free electives, that is, any subjects that are offered by an accredited high school. The range of credit allowed is from one to twelve units and the median is four units. Only 19 or 19.3 per cent of the Eastern colleges accept free electives for entrance credit. The range of credit allowed is from one to eight units and the median is three units.

There are 81 per cent of the North Central colleges that set up a group of subjects from which a limited number of units may be presented for entrance credit. The range of credit allowed is from one to ten units and the median is six units. Of the Eastern colleges 85.7 per cent accept restricted electives, the range being from one to nine units and the median, four units.

TABLE X—AMOUNT OF VOCATIONAL WORK ACCEPTED FOR CREDIT

| | *North Central Per Cent* | *Eastern Per Cent* |
|---|---|---|
| 1 unit | 0 | 3 |
| 2 units | 1 | 4 |
| 3 units | 9 | 1 |
| 4 units | 16 | 4 |
| 6 units | 1 | 0 |
| 8 units | 1 | 0 |

There are 28 per cent of the North Central colleges that set up definite limits on the amount of vocational work that will be accepted for entrance credit. There are 12 or 12.2 per cent of the Eastern colleges that set up definite limits in this field.

Table X shows that 3 per cent of the Eastern colleges will not accept more than one unit in this field. It will be noted that there is a wide variation among North Central and Eastern colleges regarding the amount of vocational work that they will recognize in their entrance requirements for secondary school students.

# Editorials

## Need for Vision

THE public schools are rapidly passing out of the panic stage of the depression. The terrific wave of unreasoning emotion that developed into a hysteria of budget cutting has spent its major force. People are regaining their equilibrium in their attitude towards their schools. During this period of hysteria budgets were cut with little reference to the educational problem as a whole.

The need of the present hour is for broad vision by school executives and boards of education in studying again the entire problem and in making adjustments on the basis of the complete needs of public education.

For some years to come the public schools will be operated on budgets that may be considered restricted in terms of 1929 money totals. If these totals are considered in the light of current prices, the real purchasing power available will not show such wide variations as are popularly supposed. The outlook for teachers' salaries is that they will tend to remain fairly constant, provided that demand and supply can be stabilized. Return to the progressively graduated schedules will probably be slow. If teachers' salaries can be maintained at the 1929 level of purchasing power the profession will not be badly off.

Although teachers' salaries rightfully consume the major portion of the school dollar, there are other supplementary but essential activities that also require immediate attention. Recent high spot surveys indicate that the most serious cuts in the depression budgets have occurred in educational supplies, textbooks and supplementary teaching materials, the operation and upkeep of the school plant and in equipment. These activities are common and vital to every school budget. Restrictions in capital outlay strike unevenly. When executives had provided for careful planning on a long time program, capital needs appear to have been well met. Districts operated on a year to year basis must also look carefully into the need for capital expansion.

Serious cuts and eliminations made in the essential supplementary activities will surely tend to lower the general instructional efficiency. It is obviously a matter of false economy to provide good teaching service and then practically to eliminate essential textbooks and good quality in educational supplies and to permit equipment to deteriorate to the point of instructional inadequacy. Looking at the problem from the opposite side, the neglect of depression budgets to provide proportionately for essential teaching aids will tend to reduce efficiency to a large extent and may consequently be classed as extravagance.

Economy is not necessarily the piecemeal reduction of money expenditures. True economy may be achieved only through such ratio of expenditures to returns as will make the total return commensurate with the total expenditures. In addition to the direct loss of teaching efficiency due to inadequate supplies and textbooks, the morale of the teacher is further affected by these conditions and this psychological factor helps to reduce her effectiveness still further.

Under present conditions of public education, these supplementary aids are relatively as important as teaching personnel. The educational budget represents a balanced total in which all activities should be related in their true proportions. Indiscriminate cutting of single activities is detrimental. Where reduction is necessary careful study should be made to make such reduction with regard for the best interests of the entire plan. Any other method will result within a relatively short period in a lowering of efficiency.

Adequate textbooks and library books, good quality of supplies and essential equipment are not extravagances. They represent in the final analysis intelligent economy in administration. Physically run down and inadequately furnished schools are going to be difficult to explain within a few years. The urgent need is for executives to see the educational problem in its entirety and to insist on proportional budget balance.

N·S

## Expression *Versus* Repression

IF ONE were requested to state in as brief a form as possible the main difference between educational practice today and that of a quarter of a century ago, one might truthfully say: "It is the substitution of expression for repression."

The educational process that we adults knew as school children was a process of constraint. We were constrained to obey definite rules of discipline. Doubtless they were good rules—certainly from the point of view of the adults who made them; but they were not made from a keen insight into child nature or with any considerable appreciation of the intelligence of childhood. Schoolmasters, with a few notable exceptions, accepted the handed down theory that children are by nature disobedient and rebellious to authority. They also

underrated the intelligence of children. Hence, there were sets of rigid rules to be observed, and the nonconformists were visited by various forms of punishment, from standing in the corner on one foot to receiving a vigorous beating before the class. Whispering and laughing, which are normal expressions of childhood, were often punished equally with lying and cheating, which are immoral and antisocial expressions.

Today we know that normal children are not naturally rebellious against authority, and that they are far more intelligent than we used to believe them to be. We need rules or agreements in any social group, whether it be a class or a community. There can be no orderly procedure without them. There is a difference, however, in the effectiveness of rules that are merely set by authority, and those that are understood and intelligently accepted by those who are to observe them. People of all ages do naturally rebel against the former; but children will cheerfully conform to the latter type of regulations, especially when under the guidance of a skillful teacher they are taught to understand the need for certain regulations, when such regulations naturally develop from class contacts. When, further, the children are given an opportunity to participate in establishing these regulations, it is surprising how fine a cooperative spirit will develop even among very young pupils. Under such intelligent treatment, which is the usual method in good schools, children will develop a sense of responsibility and responsiveness, which was never thought possible in the days of the "birch and rule."

We find a similar change in the process of instruction. A quarter of a century ago there was practically one set course of study which all were constrained to follow. Little effort was made to adapt the curriculum to the varying capacities and needs of different groups or individuals. That was especially true in the high schools where a uniform, academic course, chiefly designed in the interest of those who were preparing for college, was the rule. The result was a frightful percentage of mortality among the pupils. If 10 per cent of the school survived to appear on the platform at commencement, it was a cause for unctuous rejoicing. The fittest had survived. But what of the remaining 90 per cent? Perhaps they were unfit to pursue a collegiate course. But were they not fit for something else, possibly some service in life as valuable to society as the collegians would render?

Probably Thomas Edison or Henry Ford would not have survived an academic course. Is it not our business as educators to find out what that form of fitness is that the unacademic minds possess and to discover how it can be best developed, so that as many of the 90 per cent as possible may be brought to the completion of some course that will equip them to make the fullest use of their peculiar talents? This is precisely what the best schools are doing. They accept accountability for human wastage as conscientiously as the superintendent of an industrial plant accepts accountability for material wastage. Instead of pouring all through the same educational mold, they offer opportunities for all varieties of talent to express themselves and to profit as much as the facilities of the school will permit.

The original meaning of education was to draw out (Latin *educere*). The schoolmasters of our childhood for the most part seemed to proceed on the theory that education meant just the opposite process, pouring in—pouring in facts from textbooks which were supposed to be the final word on the subject. Everywhere the practice of repression was in evidence. Children were compelled, often at the point of a stick, to commit to memory pages of textbooks. Even history was often dealt with in this manner. Children with the best memories for facts were naturally the best scholars.

While it is still necessary to memorize certain important items in most subjects, such as certain salient rules in mathematics, or formulas in chemistry, the tendency is the other way—to encourage the pupil to express his ideas freely and to form logical conclusions from given data. Ability to think is more important than ability to reproduce facts. Facts can be looked up in handbooks and in encyclopedias by anyone who has had a little training in consulting references; but the ability to form sound conclusions and to be mentally resourceful in attacking new problems can develop only under conditions where the mind is free to react independently on given facts, and to express itself freely as opinions are reached. Today under skillful teachers we find pupils, even in the elementary grades, propounding their own questions, often questioning one another, and even conducting their own recitations. This does not mean that the teacher has surrendered his authority to the class. It means that the teacher has developed in the pupils a repsonsibility and a resourcefulness that make such a healthy situation possible.

The old picture of a schoolroom, with a homely old maid with corkscrew curls sitting on a high platform holding a stick to impress the disorderly class before her, is no longer a faithful picture of a class in school. Today, almost universally, we find a spirit of cooperation, responsiveness, industry and happiness in the country's schoolrooms.

The most satisfactory explanation of the new spirit in education is undoubtedly the substitution of expression for repression.—*E. C. B.*

# The Morale of the School Staff

A GROUP of men, each of whom had had a little experience in superintendency, had come back to a university to complete advanced work in preparation for promotion in their profession. The subject under investigation was the morale of the teaching staff. Here is the substance of the conclusions reached from a thoroughgoing inquiry into the morale of the teachers in two communities:

In Community A there is considerable restlessness among practically all of the teachers. There is underhanded criticism of school policies. The board of education and the superintendent are charged with being arbitrary, dictatorial and uncongenial. Rather rigid rules governing the duties and the privileges of teachers have been laid down by those in authority and the teachers chafe under them and criticize them surreptitiously. Little enthusiasm is shown at teachers' meetings, though there is always a full attendance because a teacher's salary is docked if she is absent from any meeting to which she has been called unless she can show that she was incapacitated. Once a year the board of education gives an evening reception to the superintendent, the principals and the teachers, but there is little social contact between the teachers on the one side and the board and the superintendent on the other. The teachers have some social life among themselves, but undue gaiety or frivolity during week nights especially is frowned upon.

In Community B there is a noticeable difference in the relations of teachers to the board and the superintendent. Educational policies are occasionally criticized, but the criticism is always given in a frank way without malice. A teacher would apparently not hesitate to tell the superintendent or any member of the board of education that she thought some of the methods in practice were out of date or that certain rules and regulations were unnecessarily restrictive. As far as could be learned there is not much criticism of this sort. The teachers say that they are free to go and come as they choose out of school hours, and they also say that they are not aware that anyone is observing them or is pretending to lay down a code of manners or behavior for them. There is certainly a better feeling toward the board of education and the superintendent in Community B than in Community A. The teachers in B engage in social pastimes several times during each school year. In A, teachers would hardly take the liberty of joking with those in authority, but in B there is a good deal of give-and-take between the two.

The young superintendents who were studying morale made an attempt to explain the differences in these two communities. Here are their conclusions: In Community B, the superintendent is more of a leader than is the superintendent in Community A. He is not a greater scholar, but he is a better "mixer." He is not apprehensive that the members of his staff will not do their best unless they are carefully watched, reported upon and governed with a strong hand. In Community A, the superintendent and the board of education depend largely upon detailed rules laid down for the guidance of the teaching staff. There are fewer rules in Community B. The superintendent meets the teachers frequently and presents to them his wishes and the wishes of the board of education regarding the work of the schools. He assumes that the members of his staff will do their best if shown the way and if they are allowed a larger degree of individual freedom. The policy in Community A is strictly against individual freedom, either in teaching or in behavior outside of school hours, and this has apparently built up a barrier between the board of education and the superintendent on the one side and the members of the teaching staff on the other.

In Community B the superintendent and the board welcome criticisms and suggestions from anybody in the school organization. No teacher feels that she would be demoted or discriminated against in any way as a penalty for presenting her views freely to the superintendent. He would not think that she was going beyond her rights. Teachers have been heard to say of him, "He is a good scout. He does not terrify us or hold us at arm's length. He is willing to take just as much as he gives."

The result of the investigation and the discussion of the morale in these two communities can be summed up briefly: Confident leadership is the first requisite in establishing good morale in a teaching staff. Granting a large measure of freedom to the individual teacher to express herself freely on any question of school policy and to live her life as she chooses outside of school as long as she does not offend against the conventions that are adhered to by most of the community is the second requirement. Those who govern must assume that those who are governed are eager to do their best. They are not to be spied upon; they are not to be hedged in by multitudinous rules and regulations; they are not to be denied freedom to criticize any phase of school work. Teachers are not to be made to feel that those in authority are set high above them for the purpose of giving them orders rather than cooperating with them in a human way. With competent, fair and genial leadership, everything else essential for good morale in a teaching staff will take care of itself.

# *Happy to Say*—By WILLIAM McANDREW

MAYBE the I. Q. experts are right in maintaining that training cannot increase mental capacity. But you never found anyone who couldn't be taught more than he now knows. You can't find any reason for not doing your best for every child put into your care. If finding I. Q.'s supplies you with alibis, you are a half-baked researcher.

MOST of the maxims of manufacturing fizzle out in school supervision. Teachers are not machines; nor is their work mass production.

CORRECTION is a disagreeable medicine, but you can administer it to a poor teacher and leave the bitterness mostly out. When a teacher reaches the point of actually asking for criticism, artistry is not far off.

THE reduction of effort which you notice in yourself following belittlement of you by some spiteful critic; the spur to enjoyable and productive work you feel after praise by some good soul, are tips for your management of others.

EVERY morning you are wealthy in possibilities. At evening you can be rich in achievements if you use your assets properly.

WRITE at night what you have done today and what you mean to do tomorrow, so shalt thou, as a wise investor, make thy time reap profits. Archeologists found this in a writing 2,582 years old. To millions the practice is shamefully new.

FROM Pythagoras to Dean Kranz, the Masters have urged you to be a good accountant of your time and work. They mean that a day should be planned as is the building of a house or an attack upon an army.

BY THE time you have devised a test that discriminates your laziness from actual fatigue, you are well on the way to being a mental hygienist. If driving into hard work dispels your indifference, you were lazy; if it continues to irk you, lie down; you're really tired.

SCHOLARSHIP as an aim of education has failed from too much getting and too little using. It's time to try more citizenship as school practice.

ONE who talks much of his duty is apt to be a bore; one who prates of yours too much, is a nuisance; but the chap who goes on doing his and keeps his mouth shut—tie to him.

THE eminent Jeremiah Jenks, student of biography, maintained that the best part of every man's life is his last ten years. Well, you are in the last ten years of your life, so far. You surely are not so churlish as to make him out a liar.

JAMES SULLIVAN, New York State archivist, of a predominantly cheerful disposition, used to experience occasional periods of exhaustive depression. He told me that one thing that cheered him up notably was the state of mind he acquired by putting his desk, his bookcases, his files into perfect order and sitting down and enjoying it.

WHEN you have learned to economize your time, you may call yourself a good business man. When you are habitually careful not to waste the time of others, you are something much more.

WHEN you show yourself hungry for praise, people let you starve. Acclaim and applause follow the man who does not need them.

ONE reason why the progress of the world is so slow is that so many of us begin as if nothing had been done. It takes us a long while to begin using successful methods already tried and proved by others. To get the habit of doing this is a large aim of education.

TO WORK and to believe that what others call your failure has some success in it is to make the proportion of gains grow measurable.

ON SOME days your mental tree is showering valuable ideas to be picked up and saved. At other times, shake it as you will, nothing worth while drops. Better carry a notebook and preserve the ripe fruit.

ONE reason why a man hesitates to utter valuable suggestions is the dread that some people will compare his practice with his propositions.

YOU can explain every good deed on the ground that it springs from the selfishness of the doer. You can also account for it as springing from generosity, and you'll feel better.

WE SCHOOLMASTERS are so much with children who know less than we that we are in danger of thinking teachers the same. Self-cure of this succeeds, but a "call down" is quicker.

I HAVE known a man to become remarkably sympathetic and helpful to others as a result of being himself, shabbily treated by his own superior.

# News of the Month

## Construction Group Sees Danger in Neglect to School Plants

THE National Council on Schoolhouse Construction, at its tenth annual convention in Hartford, Conn., held October 19 to 22, adopted the following significant resolution:

"WHEREAS, The present tendency in budgeting, which is neglecting seriously the maintenance of our public school plants by deliberately postponing essential current repairs, cannot be carried further without grave danger to the physical welfare of our five billion dollar educational investment,

*H. W. Schmidt, Madison, Wis., newly elected president.*

"Therefore, be it resolved, That the National Council on Schoolhouse Construction decry this tendency and use all educational means at its disposal to create public opinion to stem the tide against this pernicious and shortsighted practice."

Unit reports of the group committees on the development of planning and construction standards, and a discussion of possible economies that are being considered by schools during the present economic period were other features of the program.

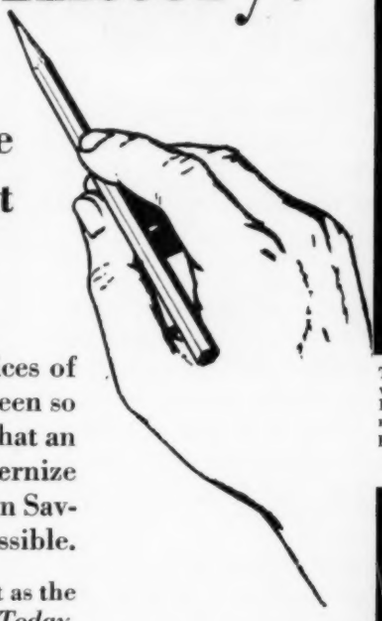
The chief work of the council during the past year has been concerned with developing better standards for the public school building. Six major or group committees were appointed in 1931 to carry on the work that had formerly been considered by the council as a whole. These committees and their chairmen include the following: sites and grounds, Guy E. Wiley, assistant chief, bureau of buildings and grounds, Milwaukee; standards for schoolhouse construction, Francis R. Scherer, superintendent, buildings and grounds, Rochester, N. Y.; standards for functional planning, Samuel A. Challman, director, buildings and sanitation, state department of education for Minnesota; standards for mechanical and service systems, H. W. Schmidt, state supervisor of buildings and high schools, Madison, Wis.; standards for equipment and supplies, Dr. W. D. Cocking, Peabody College; standards for maintenance, N. E. Viles, state director, school building division for Missouri.

### *New Officers Elected*

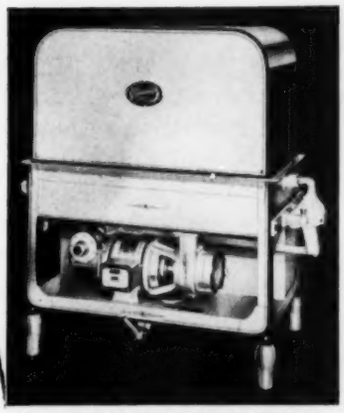
Five reports were presented to the council and tentatively considered for adoption. It is the policy of the council to try all recommendations for a year before final adoption. Owing to the absence of Doctor Cocking there was no report from the group on equipment and supplies.

In addition to the general reports on construction problems, L. W. Bishop, Richmond, read a paper on "The Effects of Wide Window Mullions on Natural Lighting"; R. H. F. Halsey, deputy superintendent of buildings, New York City, presented the results on research in artificial illumination; H. W. Schmidt reviewed the development of the many fields of opinion in heating and venti-

# PRICES are the LOWEST in Hobart History!



## *Now* . . . before they advance bring your Kitchen Equipment UP-TO-DATE



The New Model XM Hobart-Crescent Dishwashing Machine. The Smallest Automatic Dishwasher ever built. Featured by compactness, simplicity of construction and Dual-Drive principle. Fits into small space. Wide range of other models also. In the LOW PRICE RANGE!

Radically reduced prices to meet the times...prices of Hobart Electric Kitchen Machines have never been so low in our more than 30 years of history. Think what an opportunity of a lifetime this gives you to modernize your kitchen...NOW! And stop Losses and obtain Savings that only an occcasion like this can make possible.

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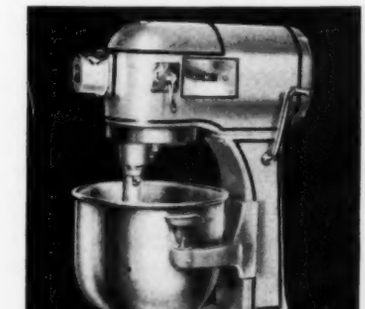
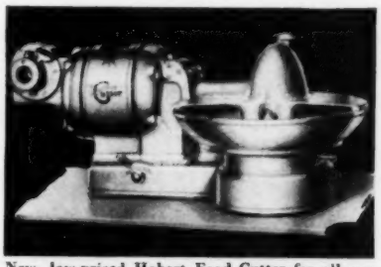
You get the advantage of the *latest* 1932 design and improvements...as in the New Model XM Dishwasher, the smallest *automatic* Dishwashing Machine ever produced...which has been added to a wide range of other Models. And in the New Bench Type Ball Bearing, Efficiency 12-Quart Mixer...which, though small, operates *large and very practical attachments*...and has every feature of the larger Hobart Machines.

Then...Hobart Food Cutters, Potato Peelers and Slicing Machines afford you such money, labor and food-saving features, that only Hobart could offer them at a time like this...at such Low Prices!

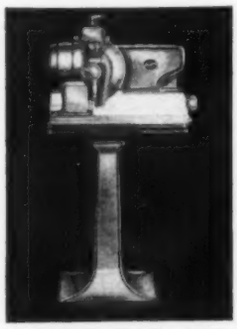
Before prices advance...in sympathy with upswinging commodities...decide to bring your dishwashing, mixing, cutting, peeling and slicing equipment *up-to-date*. Terms are easier than ever. *Now* is YOUR CHANCE! Mail coupon TODAY.



The New Hobart Bench Type Ball Bearing, Efficiency 12-Quart Mixer, Model A-120. Small size, yet operates large, practical attachments such as Meat and Food Chopper, Vegetable and Fruit Slicer, Shredder, Coffee and Spice Mill, Juice Extractor, Soup Strainer, Colander and Sieve, etc. Other Models for every need.



New, low-priced Hobart Food Cutter for all vegetables, raw and cooked meats, fruits, nuts, etc. No kitchen can afford to be without it, especially NOW!



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## News of the Month (Cont'd)

lating of school buildings; Frank Cartwright, research engineer, raised some interesting points with respect to fire-loading of buildings.

J. B. Calhoun, director, Tennessee, brought out some of the considerations essential in the field of multiple type furniture while W. G. Eckles, director, Mississippi, presented a number of carefully studied plans for the multiple science laboratory in the small high school.

Dr. Andrew Hill's paper on "Reducing Building Costs" brought out several assumptions not yet fully considered in this field. Chicago's radical economies in plant design were also presented and considered. A careful study and analysis of school costs was made by Frank H. Wood, New York City, with respect to school conditions in New York.

Raymond V. Long, director of school buildings for Virginia, was succeeded as president by H. W. Schmidt. Director J. Fred Horn, Texas, was chosen vice president to succeed Mr. Schmidt and William C. Bruce, Milwaukee, was again elected secretary-treasurer. The new executive committee consists of Prof. A. B. Moehlman, University of Michigan, chairman; S. P. Clemens, director of buildings for South Carolina, and O. S. Fitzsimons, state inspector of school buildings for Connecticut. Milwaukee was chosen as the city for the 1933 convention.

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### Course in Safety Education Offered New York City Teachers

In order to advance the program of safety education in New York City schools, the board of superintendents has approved a regulation whereby teachers who complete a thirty-hour course in safety education will be credited as having met the study requirements for one salary increment. It is stipulated, however, that the teacher must also aid in his school in advancing the program of safety education for pupils during the school year 1932-33.

Only one teacher in each elementary or junior high school is eligible to take the course, which is given by the police department with the assistance of the board of education. The teacher is selected by the principal and the district superintendent, and must have a special aptitude for and interest in the teaching of safety education.

### New Bibliography on School Finance Is Issued

A complete bibliography on school finance has just been issued by the National Survey of School Finance Commission. It appears as Bulletin 15, 1932, of the U. S. Department of the Interior. The bibliography was prepared by Carter Alexander, professor of education, Teachers College, Columbia University, and Timon Covert, specialist in school finance, U. S. Office of Education.

The bibliography covers the period from 1923 to 1931 and supplements a similar publication by the Educational Finance Inquiry Commission, under the authorship of Carter Alexander, which appeared in 1924. These two volumes constitute a valuable source of bibliographic information in the field of public school finance.

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### Trend Is Toward Larger Private Schools, Survey Finds

The average attendance in private boarding schools and colleges throughout the country this fall is 5.3 per cent less than last year, according to reports from 322 institutions to a large advertising agency. The analysis, based on the enrollment of 73,198 students, shows that the average school is 84 per cent filled, as compared with 89 per cent a year ago.

Coeducational college preparatory schools have suffered only a 5 per cent drop over a year ago, while eighty-nine boarding schools for girls show a decline of 5.5 per cent, the report states. Of these 89 schools, nine have a larger attendance than a year ago. Fourteen boys' preparatory schools have a larger total attendance than last year, although the drop in enrollment of seventy-two such schools is 8 per cent. Figures gathered from fifty military schools show a decline of 14 per cent, although six of these schools have a larger attendance than a year ago.

The report shows that New England institutions are in a better condition than are schools in the rest of the country. Twenty-six per cent of fifty New England schools are 90 per cent or more filled. This compares with 17 per cent of schools in the North Atlantic states and 46 per cent for the same New England schools a year ago. Schools in the South are better off this year than last in

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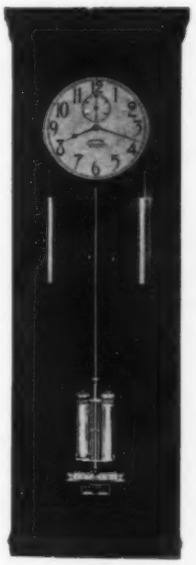

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(Check products that interest you.)
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## News of the Month (Cont'd)

comparison with those in the Middle West and North Atlantic division, although only 16.7 per cent are 90 per cent or more filled.

The report points out that schools which have a capacity for 100 or more pupils are in better condition than slightly smaller schools. Out of 154 reporting in this class, 19.5 per cent are 90 per cent or more filled and another 33 per cent have an enrollment of between 75 and 90 per cent of capacity. The number of large schools filled this year is greater in proportion than last year. In other words, there seems to be a trend toward larger schools.

Vocational schools indicate a slight increase in enrollment over last year.

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## No Bond Issues Submitted in Ohio Cities and Villages

Ohio State University College of Education, has just completed a compilation on the financial status of Ohio cities and exempted villages and the extent of financial proposals submitted at the November, 1932, election.

The report shows that no bond issues were submitted at the last election in the 108 cities and the forty-six exempted villages reporting. Nine bond issues, amounting to $351,500 were submitted in the eighty-three counties reporting.

The report further shows that for the four-year period of 1928 to 1931, inclusive, 488 bond issues amounting to $58,423,000 were submitted in cities, exempted villages and county school districts. Of these bond issues, 298, amounting to $41,477,000 were approved by the voters.

School bonds to the extent of $1,485,515 are being refunded in the cities and villages this year, according to the report.

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## Index to Educational Literature Is Published

A complete index to the editorial contents of The NATION'S SCHOOLS for the past three and one-half years appears in the first cumulated volume of "The Education Index," just published. The index is a guide to current professional literature for educational workers in the various branches of the field.

## Well Known Superintendent Dies

John H. Beveridge, superintendent of schools, Omaha, Neb., for the past fifteen years and a prominent figure in national educational circles, died suddenly on October 12.

Born in Highland County, Ohio, Mr. Beveridge began teaching school there at the age of seventeen. He was graduated from Ohio University in 1897, after which he became superintendent of schools, Glidden, Iowa. He served as superintendent of schools at Missouri Valley, Iowa, and at Council Bluffs, Iowa, for six years and nine years, respectively. He was appointed head of the Omaha public school system in 1917.

Superintendent Beveridge was elected president of the Department of Superintendence of the National Education Association at its annual meeting in Chicago in 1922. The following year in Cleveland he presided over that organization's annual meeting. Earlier he was a member of the executive committee of the Department of Superintendence.

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## Results of Chicago School Survey Told in Five Volumes

The report of the survey of the Chicago public schools made by Dr. George D. Strayer, Teachers College, Columbia University, and associates, during 1931-32, has been published in five volumes by the division of field studies of the Institute of Educational Research.

The first volume includes administration, business management, financing, educational personnel and social services. The second volume includes the fit of the school to the child and secondary and higher education. The third volume covers curricula, teaching and supervision in the elementary schools, health and physical education and vocational education. The fourth volume is devoted to the housing conditions and the operation of the plant. The fifth and final volume recapitulates and summarizes the findings and recommendations of the first four volumes.

This outside survey was initiated in October, 1931, and was concluded in the spring of 1932, probably a time record for such a survey. Time and financial limitations made it in reality an intensive high-low spot survey.

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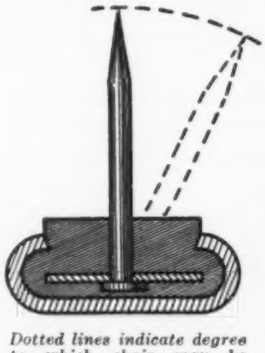

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# News of the Month (Cont'd)

## Vocational Association Plans Big Convention

The American Vocational Association will open its seventh annual convention in Kansas City, Mo., on the evening of December 7.

"Vocational Education for Changing Conditions," the theme of the convention, will be the subject of an address by Arthur E. Holder, U. S. Department of Labor. "Not Bread Alone" is the subject assigned Dr. F. D. Farrell, president, Kansas State College.

The adjustment of vocational agriculture programs to changed economic, social and educational conditions will constitute the principal theme of the agricultural education sections. Unemployment relief through vocational education is the general subject of discussion scheduled for the morning of December 8.

## One-Room Schools Show Big Decrease in Ohio

One-room schools are disappearing in Ohio, according to the *Ohio Teacher*. In 1915 there were 9,198 one-room schools in the state, and in 1932 the number of these schools had dwindled to 3,807. Until 1926 one-room schools were eliminated at an average rate of 400 a year.

Seven counties in Ohio have eliminated all one-room schools; one county still has one of these schools in operation; three counties are still operating two one-room schools each. There are four counties in Ohio that still have more than 100 one-room schools each.

## Inquiry Into Education Is Planned in New Jersey

Appointment of a fact finding commission to make a survey of the New Jersey system of education, the cost of which exceeds $100,000,000 a year, is planned by Governor Moore.

The governer announced his intention to name such a body following a conference with a committee of the state teachers' association, which has offered to finance the study. It is planned to name a commission of twenty-two members, twelve being laymen and the remaining ten being selected from among the educators of the state.

The object of the survey is to establish the important features that should be retained in the educational services and to indicate which, if any, might be discarded.

Among those who attended the governor's conference were Paul Loser, superintendent of schools, Trenton, and James A. Nugent, superintendent of schools, Jersey City.

## The Christmas Seal Goes to School

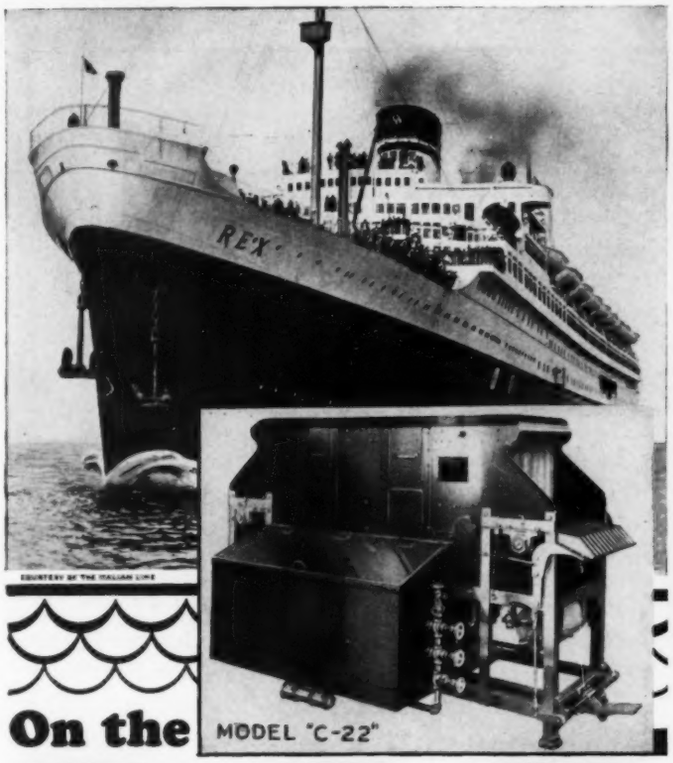
The appearance this month of the bright little penny Christmas seals is a potent reminder that tuberculosis is both preventable and curable and that it can be detected in children years before it becomes active.

Health instruction for pupils still is comparatively new for the public schools generally, although a few years ago the National Education Association placed "health" at the head of the list when framing its objectives, according to Ethel A. Grosscup, child health service, National Tuberculosis Association.

In grade schools, responsibility for teaching health to children falls largely upon the regular teacher. She is obviously the person who should do this, for she is with the children most of the time, day after day. Yet in many instances she has had no preparation for this responsibility.

In many parts of the country Christmas seals provide the answer, for tuberculosis associations, which are supported by the sale of Christmas seals, use part of their funds to employ health teachers to help instruct school teachers to train children in health habits. School administrations have welcomed this assistance, and many of them have engaged the health teachers as permanent members of their staffs.

These workers not only help train teachers in newer health knowledge, but in many cases they have influenced school authorities to permit the local tuberculosis association to conduct a free tuberculin testing and x-ray examination of all the school children, and have arranged to secure the parents' permission to examine their children. By means of such examinations it is possible to detect at an early age those children who need particular care. The local tuberculosis association then takes steps to care for these children.

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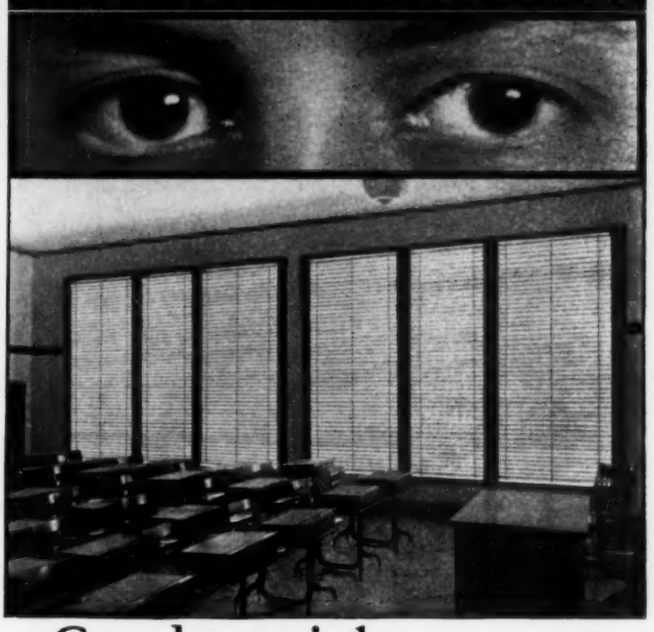

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# In the Educational Field

AUSTIN R. COULSON, deputy superintendent of schools, Albany, N. Y., since 1927, was recently appointed superintendent to succeed DR. C. EDWARD JONES, resigned. MR. COULSON has been identified with the Albany school system for twenty-two years.

RALPH BAIRD is the new superintendent of schools, Scottsville, Kan., succeeding W. E. PARSONS.

FRANK E. MATHEWSON, Madison, N. Y., who for more than thirty-six years has been engaged in educational work, retired recently. He served as superintendent of schools in the fourth district of Oneida County, New York, for more than nine years.

SIMON B. SIVELLS, for the past ten years superintendent of schools, Marietta, Okla., died recently after an illness of several months. He was fifty-four years of age. Before becoming associated with the Marietta school system, MR. SIVELLS was engaged in school work at Checotah, Okla.

JOHN LUND, formerly superintendent of schools, Norwalk, Conn., is now head of the Newton, Mass., school system. PHILLIP JAKOB is the new superintendent of the Norwalk schools.

MARY ROBBINS HILLARD, founder and headmistress, Westover School for Girls, Middlebury, Conn., died on October 10 after a week's illness. MISS HILLARD would have completed half a century of teaching this year and had intended to retire at the end of the present school term. She was seventy years old on June 14. MISS HILLARD was a member of the New England Association of Colleges and Preparatory Schools and the Headmistresses' Association. LOUISE B. DILLINGHAM has been appointed headmistress at Westover School for Girls, to succeed MISS HILLARD.

HARPER L. PENDRY has been appointed superintendent of schools, Athens, Ohio. Other newly appointed city school superintendents in Ohio include: GILBERT D. ROBERTS, Cuyahoga Falls; HAROLD R. MAURER, Garfield Heights; CARL E. LARSON, Ironton; W. W. ANKENBRAND, Rocky River.

AUGUST W. WEIGL, formerly superintendent of schools, Chetopa, Kan., has been elected superintendent of schools, Picher, Okla. MR. WEIGL's successor at Chetopa is ERNEST F. MCCUE.

MYRT ROLLINS was recently elected president, board of education, St. Louis, Mo. He has served as vice president of the board for the past two years.

FRANK W. WEBSTER is the new superintendent of schools, Southern Pines, N. C.

L. H. MOSSER, formerly superintendent of schools, Highland Park, Kan., has succeeded G. A. SWIFT as superintendent of schools, Blue Rapids, Kan.

EVERETT A. BARTO, superintendent of schools, Ossining, N. Y., died recently following an illness of several months. He was in his sixty-fifth year at the time of his death, and had been head of the Ossining public school system for the past thirteen years. HAROLD V. LOOMIS, who has been associated with the Ossining school system for ten years, has been appointed temporary superintendent.

RITA MCKENNA has suceeded E. J. GEORGE as superintendent of schools, Greeley, Kan.

DR. ALFRED E. STEARNS, headmaster, Phillips Andover Academy, Andover, Mass., acting on the advice of the board of trustees, will be absent from his post at the academy during the scholastic year 1932-33. DOCTOR STEARNS will spend a vacation in Europe. During his absence, DR. CHARLES H. FORBES will be in charge of the academy.

JAY EARLE THOMSON has been appointed to succeed WILLIAM H. STEEGAR as superintendent of schools, Garfield, N. J. MR. STEEGAR has been associated with the Garfield school system for twenty-five years. His successor comes from Jersey City, N. J., where he was principal of Public School No. 5.

S. RAY SMITH has succeeded LEE CORDER as superintendent of schools, Asherville, Kan.

HARRY W. BLAKE has been appointed superintendent of schools, New Canaan, Conn., succeeding HENRY W. SAXE, who was recently named superintendent emeritus.

C. C. HAWORTH, for many years head of the school system, Burlington, N. C., is now superintendent of schools, Salisbury, N. C. H. M. ROWLAND, formerly superintendent at Washington, N. C., is now superintendent of the Burlington schools. E. S. JOHNSON has succeeded MR. ROWLAND as head of the Washington schools.

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Flexibility in classroom size and arrangement is an extremely desirable feature of the school building in a growing community. Often a small building is sufficient to care for immediate needs but future expansion must be taken into consideration.

Even though great foresight is used in planning the original building it is difficult to incorporate a small unit of this type into an enlarged structure without considerable remodeling. The remodeling necessary to change the masonry partitions of the original structure is expensive, requires considerable time, and usually the section being remodeled must be closed because of the dirt and noise arising from work under way.

### *Valuable When Remodeling Is Needed*

Sometimes it is necessary to use the original building as an elementary school, and in some cases it is definitely known at the time of construction that the small unit will eventually become a junior high school. One school or the other is going to be handicapped in its work unless the classroom arrangement can be easily changed. Even if the school is merely to be enlarged in size it is often desirable to relocate the various departments for convenience of administration. It is often difficult to make these changes without tearing out masonry partitions.

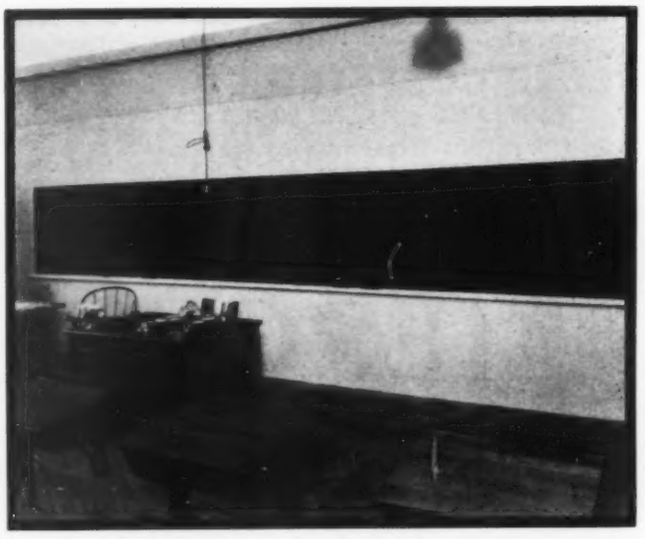
However, by employing movable steel partitions these changes can be made over a week-end with unskilled labor and with a minimum of dirt and dust being created.

A movable type of partition may be advantageously installed at the beginning of the building program. The probable lower cost, depending on the specific conditions to be met, and the ease and rapidity with which the changes can be made without disrupting school routine are the chief advantages of the movable partition for general use throughout a school. The movable partition provides an easy solution when an old building is to be remodeled and the larger rooms are to be subdivided into smaller ones.

Conditions similar to those mentioned arise constantly in growing school communities, and to meet them several types of soundproof metal partitions have been developed by two manufacturers.

The Hauserman Company, Cleveland, has developed a sectional steel wall that is soundproofed and fire resistive. Its appearance and finish may be made to harmonize with the classroom walls no matter whether they are of plaster or wood paneling.

The partitions consist of vertical interlocking sections about two and one-half inches thick. The



*Metal partitions are used to divide the classrooms at East Boston High School, Boston.*

exterior surface of each side is a heavy-gauge steel plate, lined with a layer of soundproofing material. Air space between the two plates provides further sound insulation between rooms.

The sections are manufactured in various widths and heights to meet the varying requirements of school rooms. Each section rests on shims and is held in place laterally over upstanding lugs fastened to the floor at the juncture points. A heavy reenforcement channel, vertically adjustable, extends to the ceiling at each unit to provide rigidity. When connections are made to the fixed building walls or columns a variable wall closure permits scribing the section to a tight contact. The space between the top of the section and the ceiling is

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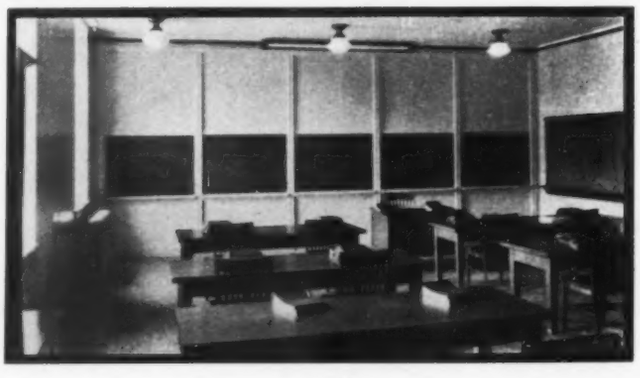
*The above picture shows how metal partitions are used by the manual training department of an Ohio school. The lower picture shows a standard classroom partition.*



closed with a double steel or double mineral board filler. Scribing around beams, pipes and other obstructions near the ceiling and within the ceiling filler is done right on the job in order to ensure a tight fit.

Glazed or solid doors, with or without transoms, may be placed anywhere in the partition. The doors may be interchanged with fixed units. High or low borrowed lights, glazed with any type of material, may be installed in these partitions.

Blackboards with standard chalk rails and cork boards may be placed at any point and at any height to suit the requirements. The blackboards may be double faced, with one side available in each of two adjoining classrooms. A double blackboard with soundproofing should be installed when the prevention of sound transmission is important.

The partition base is vertically adjustable to varying floor levels. It can be adjusted on either side of the partition independently of the base on the opposite side. The base member is hinged at the bottom to provide access to a double, continuous lay-in wiring chaseway for concealing telephone and electric wires.

Either wood or metal moldings may be used with these partitions, to divide the wall surface into panels, for trim around blackboards and doors and to form the base and the picture molding.

The metal is given a satin lacquer finish to prevent glare and reflection. Various finishes are available, including flat colors of either a smooth or rough texture and selected wood finishes reproduced by the photographic process.

The Mills Company, 965 Wayside Road, Cleveland, has developed an interchangeable metal partition for school buildings. The partition panels are soundproofed and the wall is fire resistive.

The wall is made up of interchangeable sections, varying from twenty to sixty inches in width by multiples of five inches. Two twenty-inch sections, for example, exactly replace a forty-inch section,

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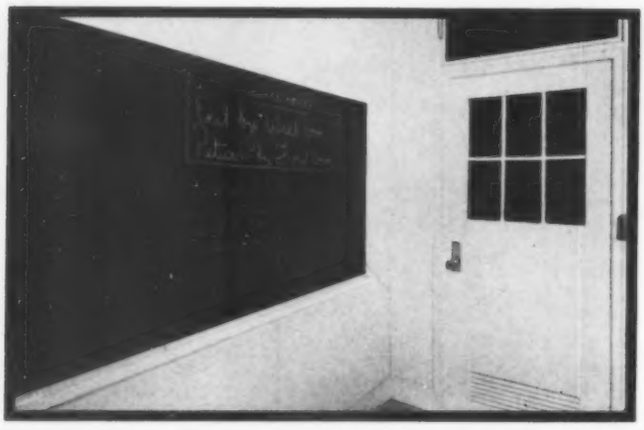
and a standard door is interchangeable with a forty-inch section. The partitions are divided into panels by posts, stiles and rails which hold the removable panels. These wall panels may be of steel, glass, slate or cork. The steel panels are faced on either side with a heavy-gauge steel and there is a soundproofing material between the two sheets. It is optional with the slate and corkboard



*Metal partition installation, showing the blackboard, the louvered metal half sash door and the transom.*

panels whether a single sheet shall be used or a double one with soundproofing between.

The partition is anchored to the floor by a channel that provides rigidity. The partition base may be adjusted to any unevenness in the floor. The top of the partition is reenforced by an inside structural member that is anchored firmly to the posts. This member is covered by an exterior cornice molding. In long runs of the partition a standard ceiling post provides reenforcement against lateral movement, but does not change the exterior appearance of the partition. The space between the top of the cornice and the ceiling may be filled in with a steel panel section or a composition board. An end filler scribed to the wall is used as an end closure.

### *Wide Range of Colors Available*

Doors and transoms are interchangeable with the panel units. The transoms are center pivoted and they are operated by a concealed action.

Blackboards, chalk troughs, tack boards, bulletin boards and borrowed lights, glazed with any type of glass, may be placed at the desired height by means of proper panel selection.

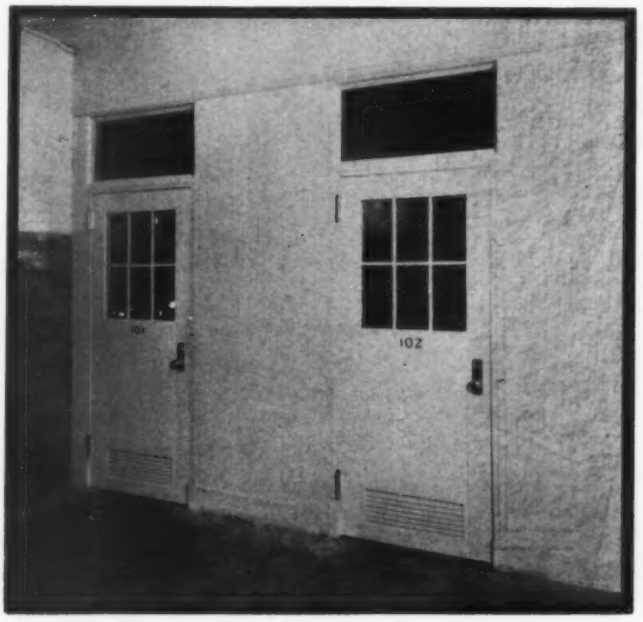
There is conduit space in the base and in the posts to allow for electric wiring.

The partitions may be had in plain colors or in two-tone finishes as well as in grained finishes that have the appearance of wood.

Since the metal partition can be made up in a great variety of arrangements and panel materials, all that is necessary is to select the appropriate one for the classroom, the shop, the office, the laboratory or the corridor. Wardrobes, lockers and cases may be incorporated between the partitions, clear glass panels may be used where more than one room is to be supervised by a single teacher or a solid steel wall may be built for a storage room. The treatment of the two sides of the wall do not need to be the same unless a glazed partition is used. Corridor walls in buildings of skeleton construction can be built with steel partitions. When the construction is of the wall bearing type the corridor wall and the inside wall of the classroom have to be masonry, and in this case the metal room partitions should be given the same finish as the plaster walls.

### *Single Unit System Is Best*

In using movable partitions in new construction it is desirable to select one unit of construction. This ensures greater flexibility of arrangement. A unit of approximately eleven feet, used in multiples, would provide a large variety of workable rooms, such as an eleven-foot storage room, a twenty-two foot recitation room, a thirty-three foot classroom and a forty-four foot laboratory. Windows, doors, cases, lights and heating and ventilating equipment, placed with regard to the unit,




*Glazed or solid doors, with or without transoms, may be placed anywhere in the partition.*

would allow the greatest number of locations for the partitions. This unit system would also preserve the balance of lighting and ventilation necessary to maintain high standards of health and sanitation, almost regardless of the location of the partition.

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# An Inexpensive Portable Typewriter for the Elementary School

A radical change in typewriter design is found in a new portable machine. The mechanism has been greatly simplified by the elimination of a variety of movements—only those adjustments being kept that are absolutely essential for proper typing —thus making this a low priced machine. This machine because of its simplicity of operation and type of letter is definitely built for elementary school use. However, it also has a definite place in high school and college work.

The new type face of the Royal Signet typewriter was designed to eliminate the shift key. The shift key has been placed on the standard typewriter to allow the use of both upper and lower case letters.

*The use of monoface type on this portable typewriter eliminates the need for a shift key.*

The new monoface type is all of one value being slightly slanted sans serif capital letters. This letter and the appearance of the typewritten page are similar to the block printed letter that many pupils are now being taught to use for their compositions in elementary schools. The fact that pupils have been using this block printed letter for their school work makes this innovation in a typewriter face seem less startling, and the slanted letter gives a flow to the line.

### *Will Write Speedily*

Beginners, and especially children, have difficulty in learning to type with the more complicated machines where a shift key is used. With this new type of machine the fundamentals of typing are instilled without a multitude of adjustments that confuse and disturb the operator. For the mature typist this should mean an increased speed in writing, and a comparable proportionate speed for persons, particularly young pupils in elementary schools, who are taking up typewriting for the first time.

The Royal Signet is a small, compact typewriter that is actually as sturdy as the standard portable and almost as large. It weighs seven pounds and eight ounces. The spacing and arrangement of the keys is standard, as is the key depression. There are forty-four characters, one for each key, with a full alphabet and all necessary punctuation marks, signs and numerals usually demanded for school subjects.

### *There Is No Back Spacer*

The adjustments on this machine are simple and accessible. There is a combined line space and carriage return lever for single spacing only, a right cylinder knob, paper release lever, carriage release lever and cadmium plated space bar. There is no back spacer. There is a left hand margin stop only, but this is adjustable for either narrow or wide margins and may be easily changed for different pieces of work.

This typewriter is cross braced for strength and rigidity, has a roller trip escapement, and the carriage rails ride on controlled ball bearings. The top and sides are given full dust protection and the key levers are equipped with nickeled rings and celluloid finger pieces. No preparatory adjustments are necessary.

### *Designed for Elementary Schools*

The capacity of the machine is a standard 8¼-inch letter head, writing a full width line. A full length portable typewriter ribbon on standard spools and of a single color is used. A manual ribbon reverse control is found on the base of the typewriter.

The finish of the body of the machine is a durable green velvetone that does not reflect light. Other parts of the machine that are subject to frequent handling are finished in cadmium. A black fabricoid carrying case may be obtained for this portable typewriter, which is manufactured by the Royal Typewriter Company, Inc., 2 Park Avenue, New York City.

Because of its simplicity of operation and type of letter, this typewriter is obviously built for elementary school pupils. The results obtained with typewriters for elementary school work have been published in "A Digest of an Experimental Study of the Educational Influences of the Typewriter in the Elementary School Classroom," written by Benjamin D. Wood, Ph.D., Columbia University, and Frank N. Freeman, Ph.D., the University of Chicago.

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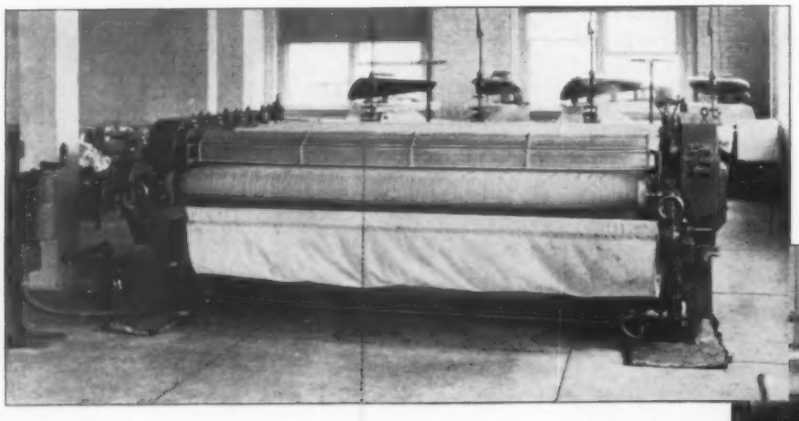

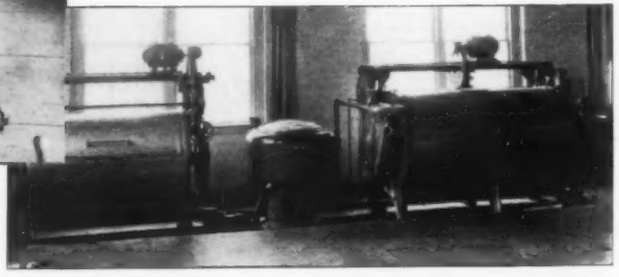

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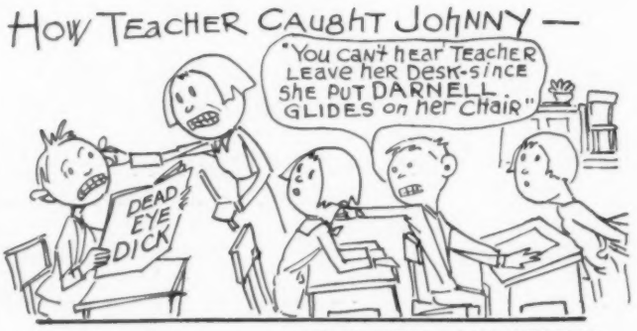


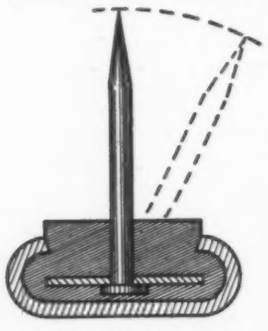

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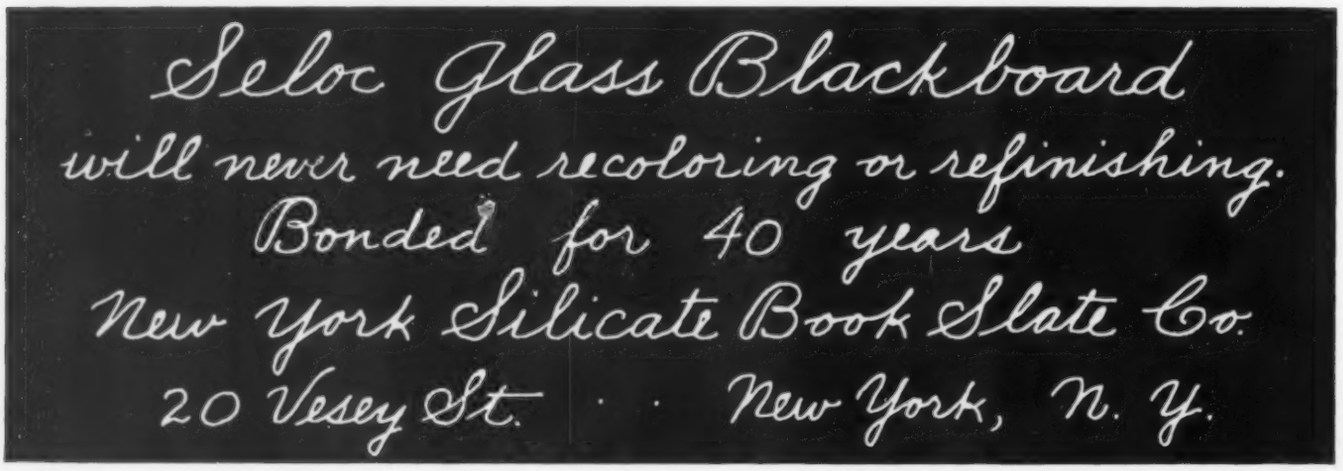
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**For Old Schools or New, Large or Small . . .**

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*Accurate Temperature and Greatest Economy with the*

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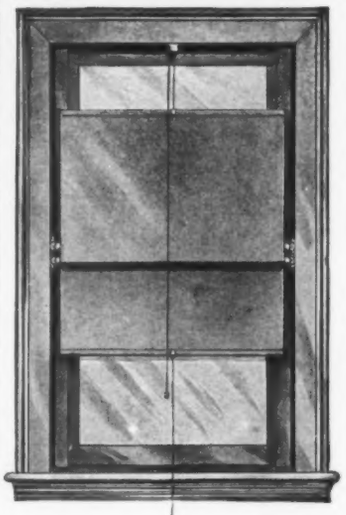

**Double Hung Window Shade Installation**

*Two window shades are installed at center of window. One shade may be pulled up to cover upper sash, the other shade pulled down to cover lower sash. Double hung window shade installation is suitable for schools and hospitals. Permits control of light and air.*

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The need for plenty of air in the school room has resulted in most school installations being double hung.

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Twenty years of experience in equipping High Schools has placed us in a position to know the particular requirements for your stage.

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*Write us for further information or request call from our representative*

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# Many hours of THIS . . .

# Many hours of THIS . . .

*have you ever stopped to realize what it does to your students?*

IN the average school year, the average child spends 970 hours at his desk, of which about 485 hours are devoted to reading! Hours that mould students mentally . . . and physically as well.

The gymnasium and play period can not overcome the physical disabilities resulting from continual stooping over and slumping in school seats. Educators are beginning to realize this. Correct seating is also a factor in sight conservation. That is why so many schools are adopting the American Universal Desk illustrated to the left.

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*Makers of Dependable Seating for Schools Churches and Public Auditoriums*

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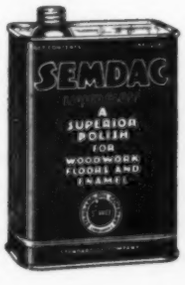
Semdac Liquid Gloss finds universal use in the school. Its great cleansing action, its high luster, and its ease of application make it exactly suited to all school needs. Semdac can be economically purchased in barrels, half barrels, five gallon, half gallon, quarter and pint cans.



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**SEMDAC**

**LIQUID GLOSS ··· FURNITURE DRESSING**

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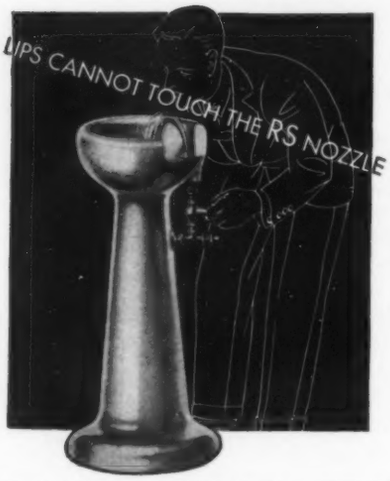


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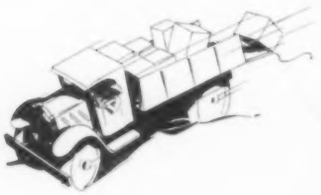
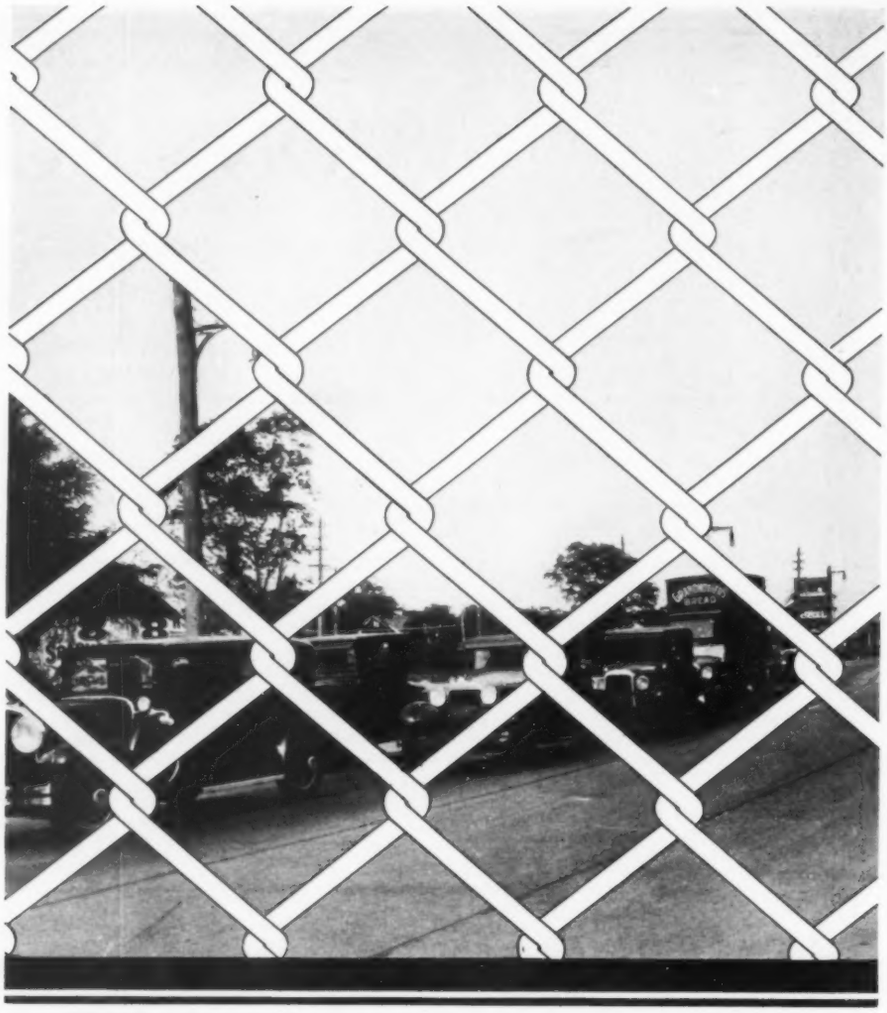
# DANGER

## lurks around the school grounds





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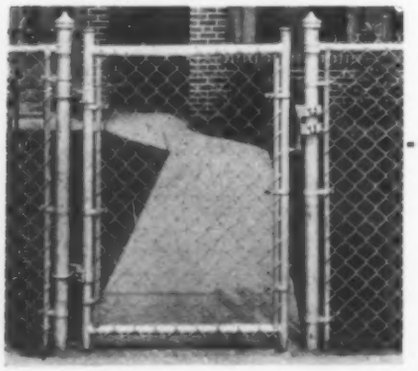
Wickwire Spencer Fences are made all heights, all weights, with or without barbed wires



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